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THIRD SERIES VOL 66 NUMBER 4 FEBRUARY 1959

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

66 PORTLAND PLACE LONDON W1 · THREE SHILLINGS AND SIXPENCE

Drinking fountain, Munkegaards School, Gentofte, Denmark. Architect: Arne Jacobsen

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Time and again, industrialists large and small place repeat orders with Colt. And for three good reasons. Colt ventilation systems depend in the main on internal convection currents—*not* external forces—and are therefore little affected by the vagaries of the wind. Colt offer an unparalleled range of ventilators. And most important, every Colt recommendation is based on a thorough analysis of the building, plant and process either from a site survey or drawings. Such thoroughness influences firms such as the English Electric Co. Ltd. It will impress you, too.

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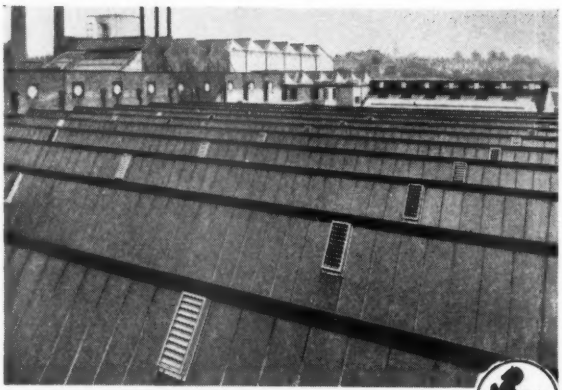

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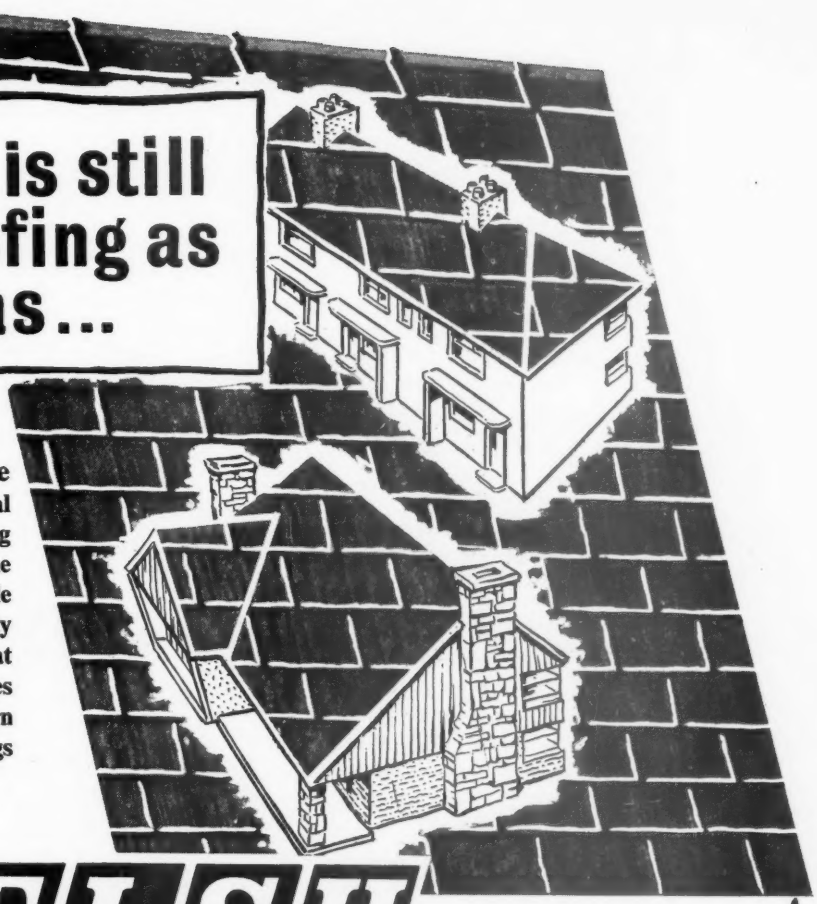

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+ COST OF HOLD-UPS

+ COST OF SITE DISRUPTIONS

+ COST OF MATERIALS

Use KEY and cut this total cost

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Key pipes comply with BS2760 1956. They are the first pitch fibre drainpipes to carry the British Standard 'Kite' Mark. This is a guarantee of quality and means that the Inspectors of the British Standards Institution have access to our pipe factory at any time.

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No corrosion Remarkably resistant to acids and alkalis.

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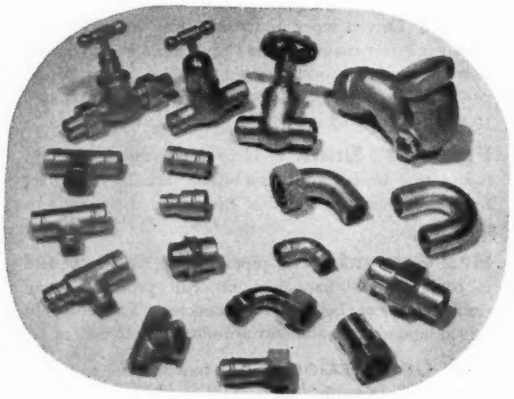

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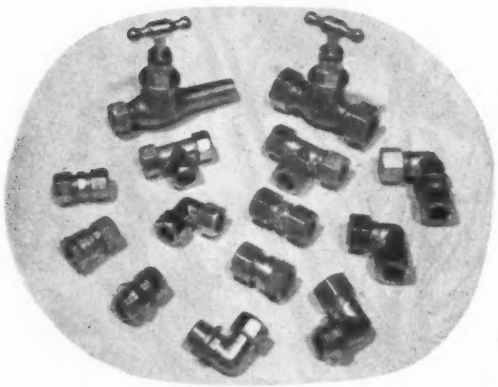

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- ✱ Prevent staining and streaking.
- ✱ Do not block the pores of building materials; thus do not inhibit "breathing."
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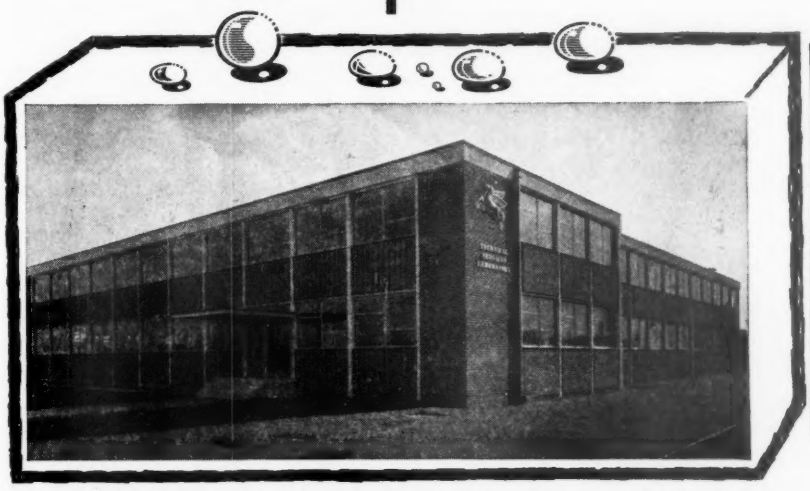
All over the country DRI-SIL treatments have been used on many buildings large and small, old and new. Use a masonry treatment based on DRI-SIL silicones to guarantee the quality.



The external concrete frame of this imposing new Technical Service Laboratory for the Mobil Oil Company at Coryton (Architect S. Greenwood A.R.I.B.A.) is faced with precast concrete units treated with a water repellent based on DRI-SIL silicone. *Photo by courtesy of Mobil Oil Company Ltd.*

Proof of the effectiveness of these treatments is shown in this table		% Water absorption after 24 hours' immersion	
		Initial Test	*Retested after 3 years' natural weathering*
Sandstone	untreated	7·0	6·2
	DRI-SIL treated	0·1	0·2
Cement Block	untreated	6·0	5·9
	DRI-SIL treated	0·4	0·7
Common Brick	untreated	20·0	20·1
	DRI-SIL treated	0·1	0·3

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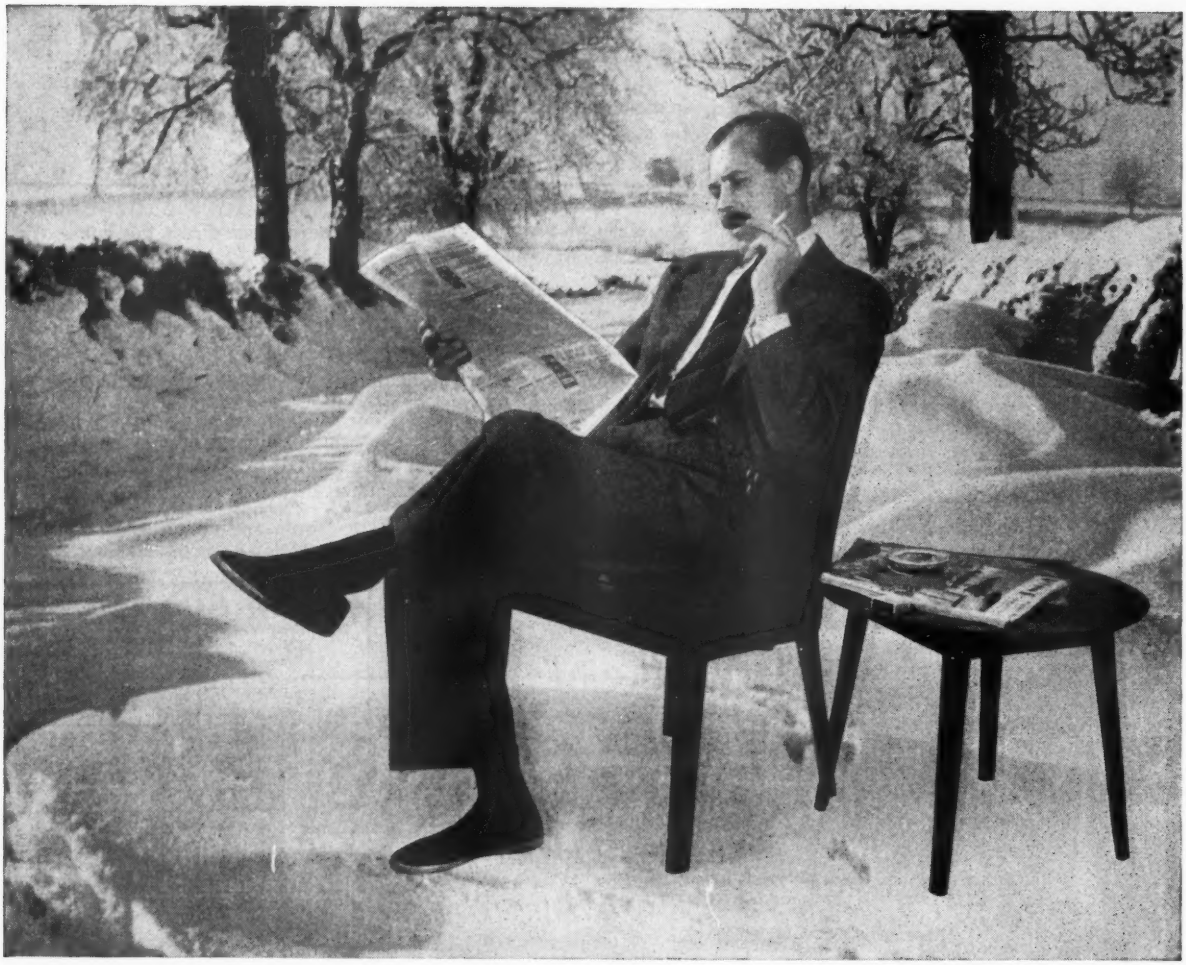
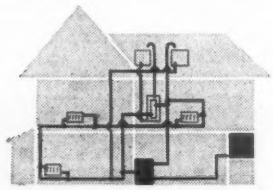


"Open plan" living demands modern heating



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The trend towards "open plan" living requires a heating system that heats an area equivalent to several rooms at once; oil-fired heating does this automatically, economically and with the minimum of attention. Moreover, with a choice of panel-type heating, radiators, skirting-board heating or warm-air circulation, the architect can harmonise the heating system with other features of his design.

Oil-fired central heating works unseen

A further advantage of this system is that all the pipes, radiators and equipment can be **out of sight**—leaving the architect completely free to produce a clean plan, unhindered by fireplaces and chimneys. **Consider oil-fired central heating at the earliest stage of your planning.**

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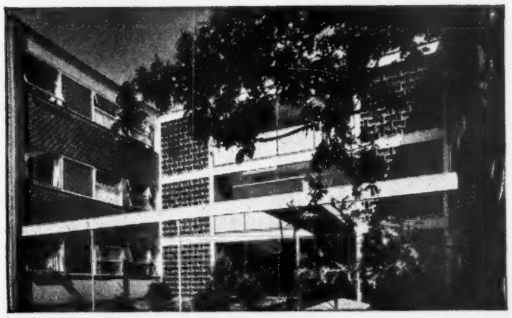
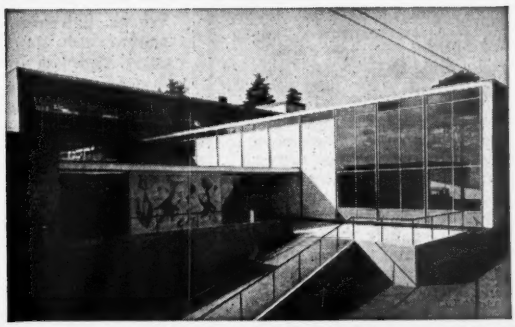
Architects: Waterhouse & Ripley, F.R.I.B.A.
Main Contractors: Holland & Hannen and Cubitts Ltd.

leading



Flats at Parkley's, Ham Common.
Architect: Eric Lyons, F.R.I.B.A.
Main Contractors: Wates Ltd.

architects



Fairlawn Primary School, Lewisham, for the London County Council.
Architect: Peter Moro, F.R.I.B.A.
Main Contractors: E. H. Smith (Croydon) Ltd.

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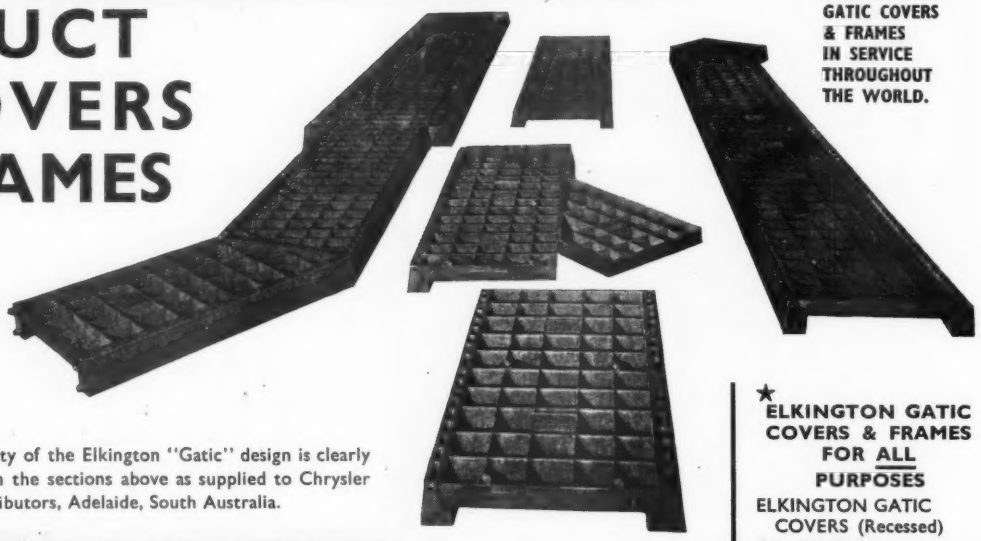
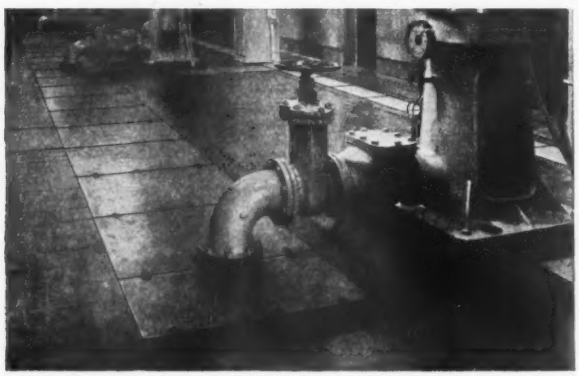


The versatility of the Elkington "Gatic" design is clearly illustrated in the sections above as supplied to Chrysler Dodge Distributors, Adelaide, South Australia.



'Elkington Gatic' medium light duty duct covers, installed in Kings Road Pumping Station for the Bury St. Edmunds Corporation.

Non-rocking, water-tight and air-tight are permanent, un-deteriorating features of *every* 'Elkington Gatic' Cover and Frame.

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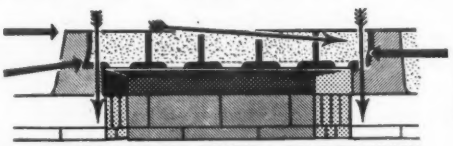

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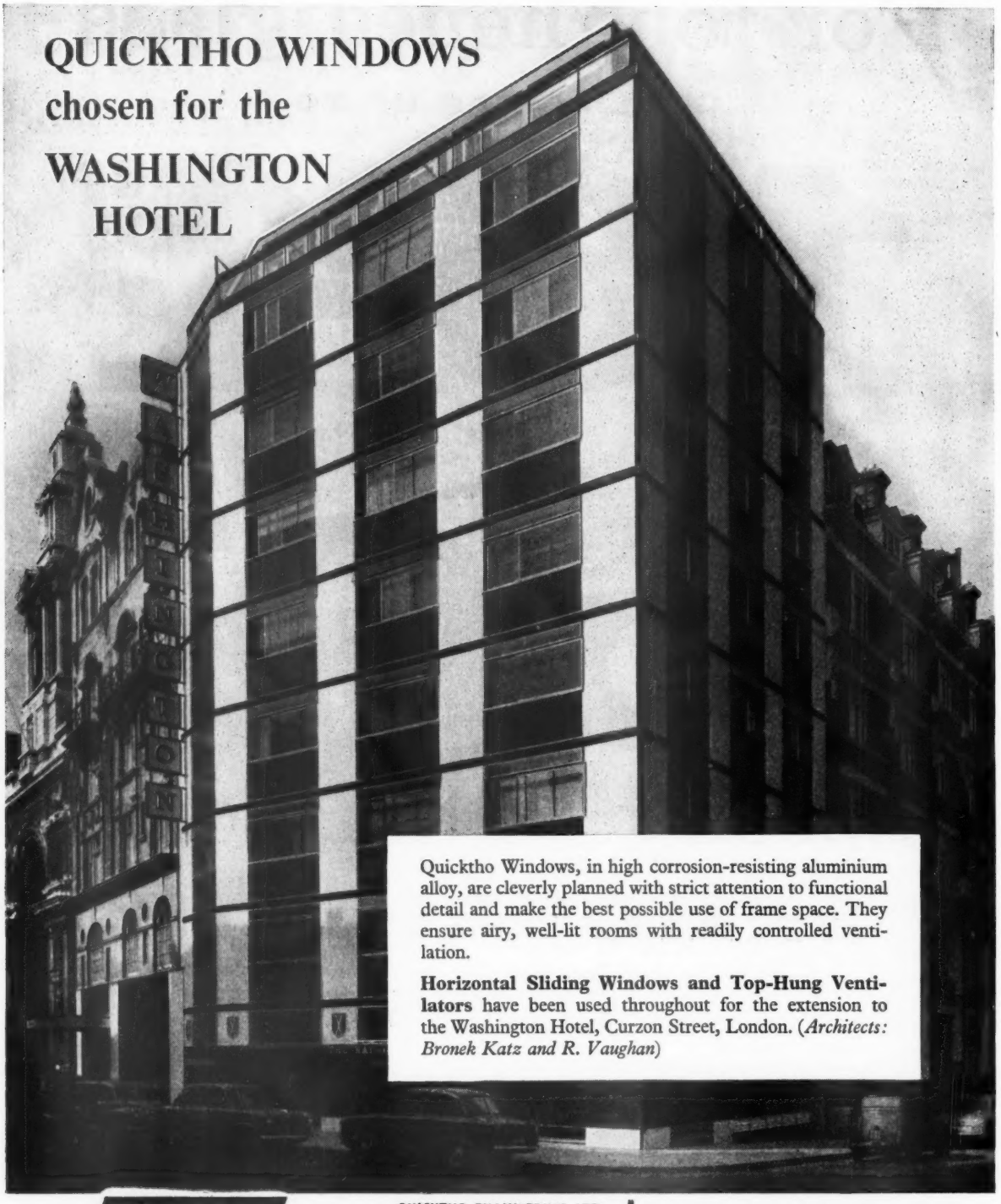
chosen for the
WASHINGTON HOTEL



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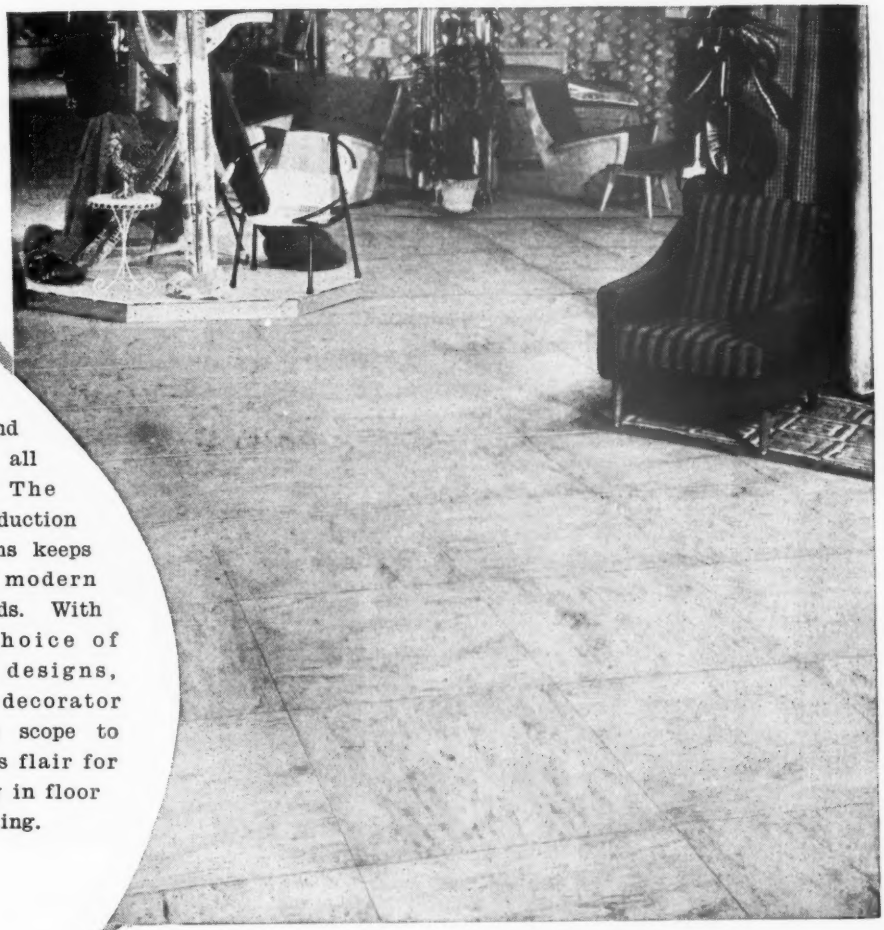

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Justin H. Alleyn B. Arch., F.R.I.B.A.

Contractors:
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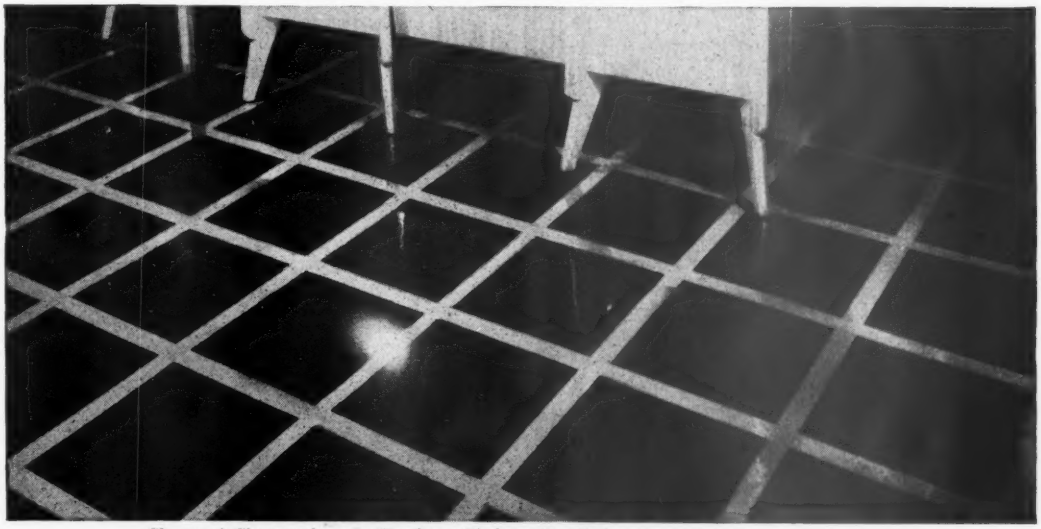
with a magic carpet of natural *stone*



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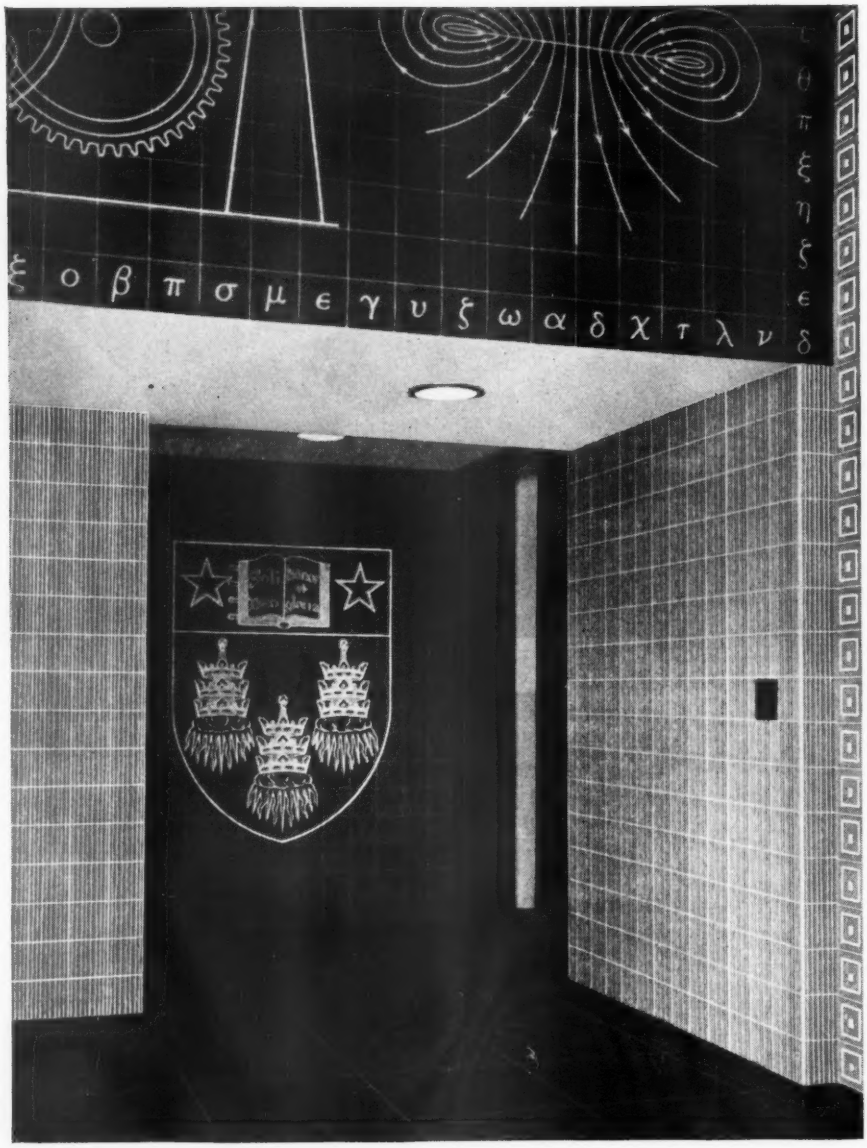

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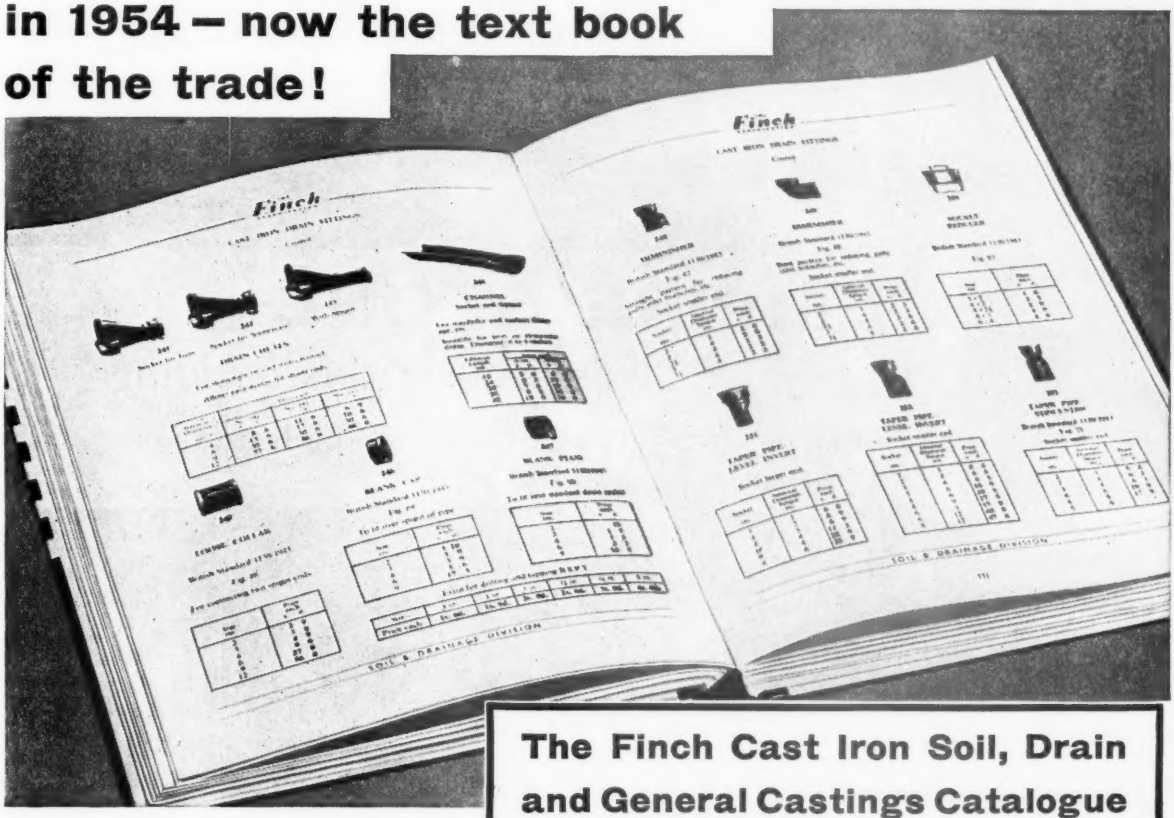

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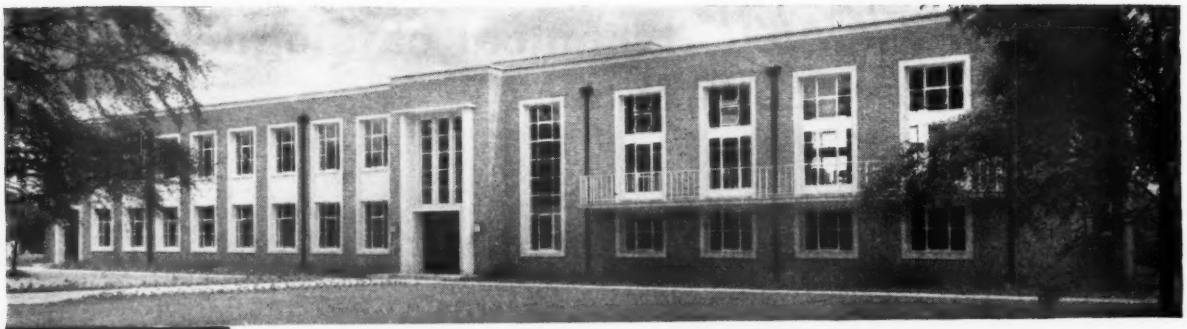

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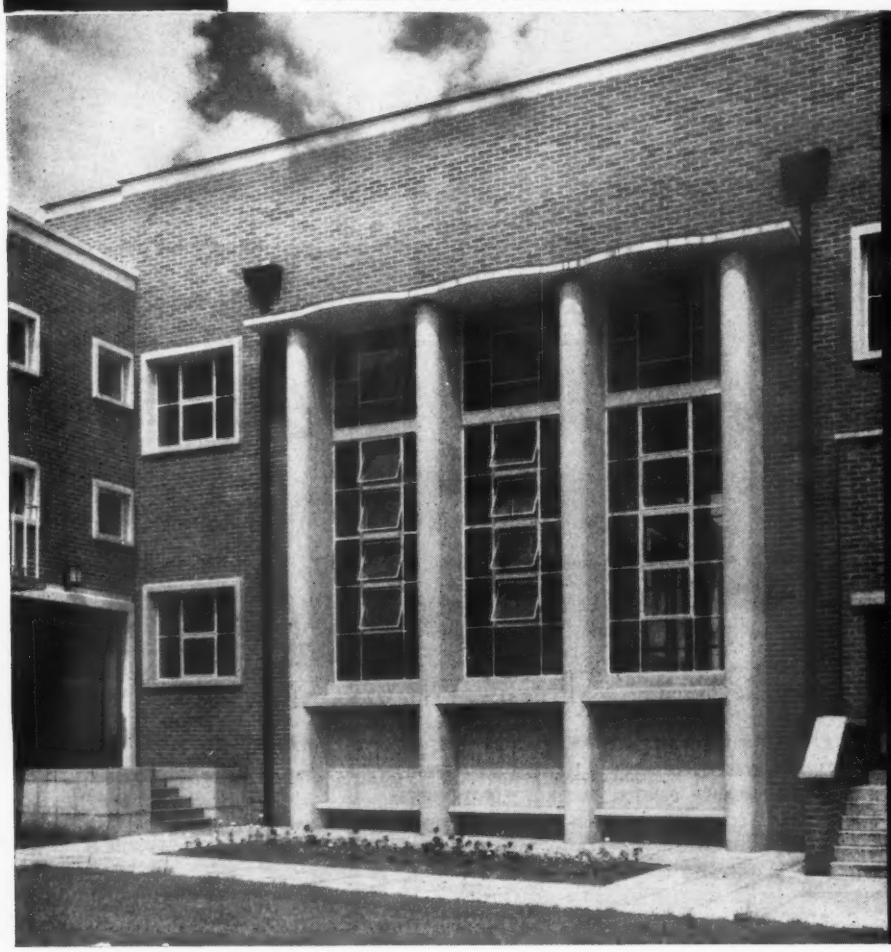

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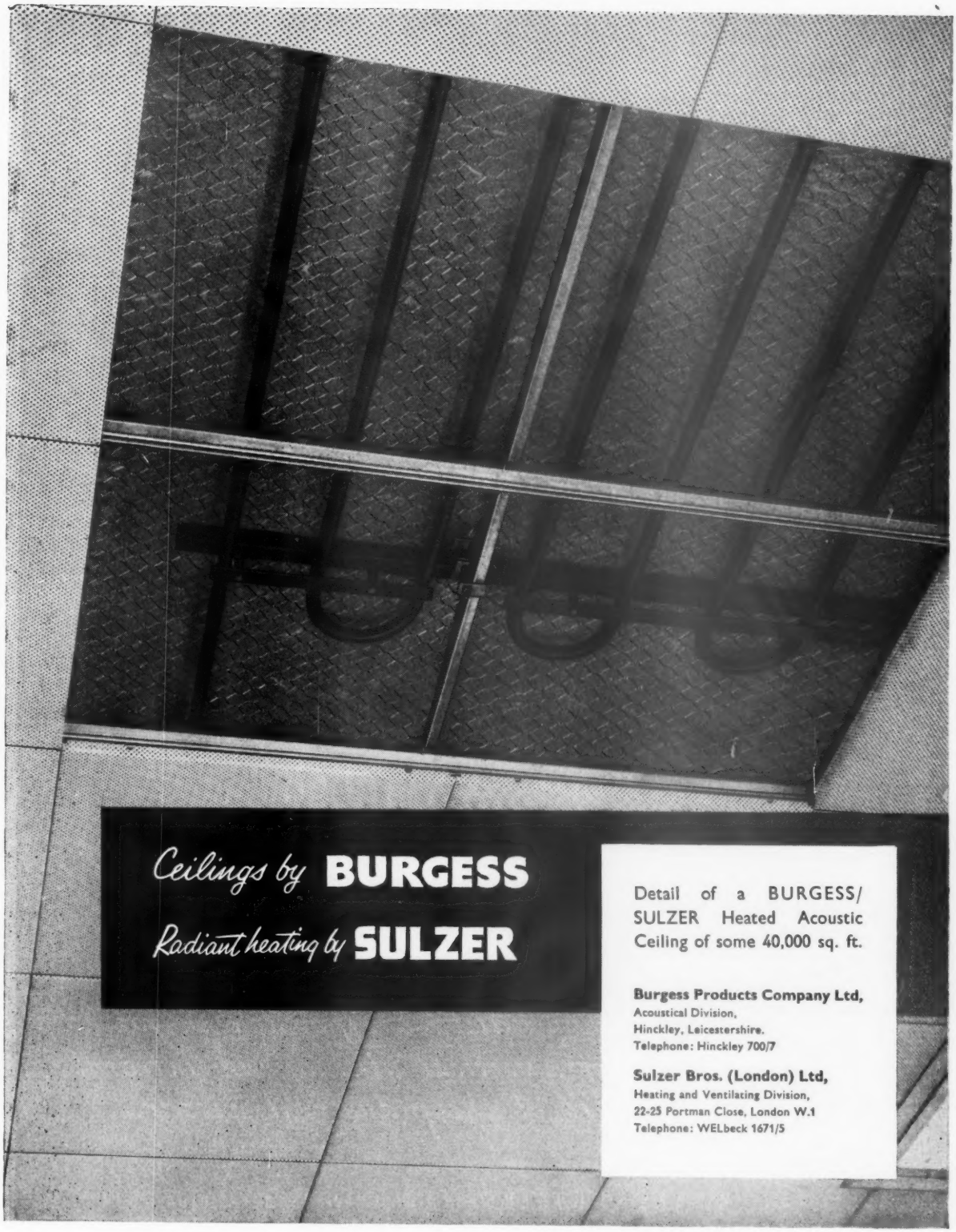
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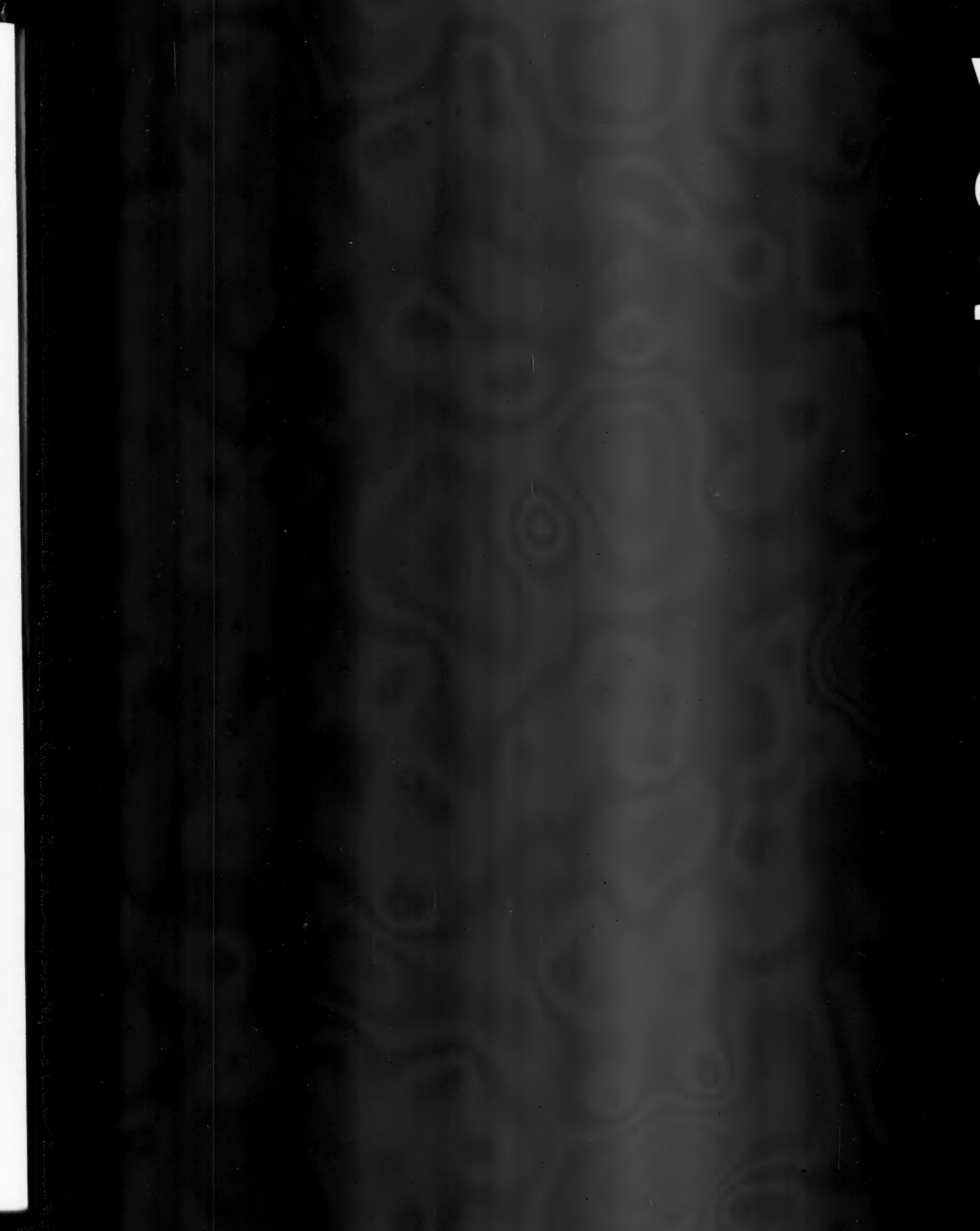

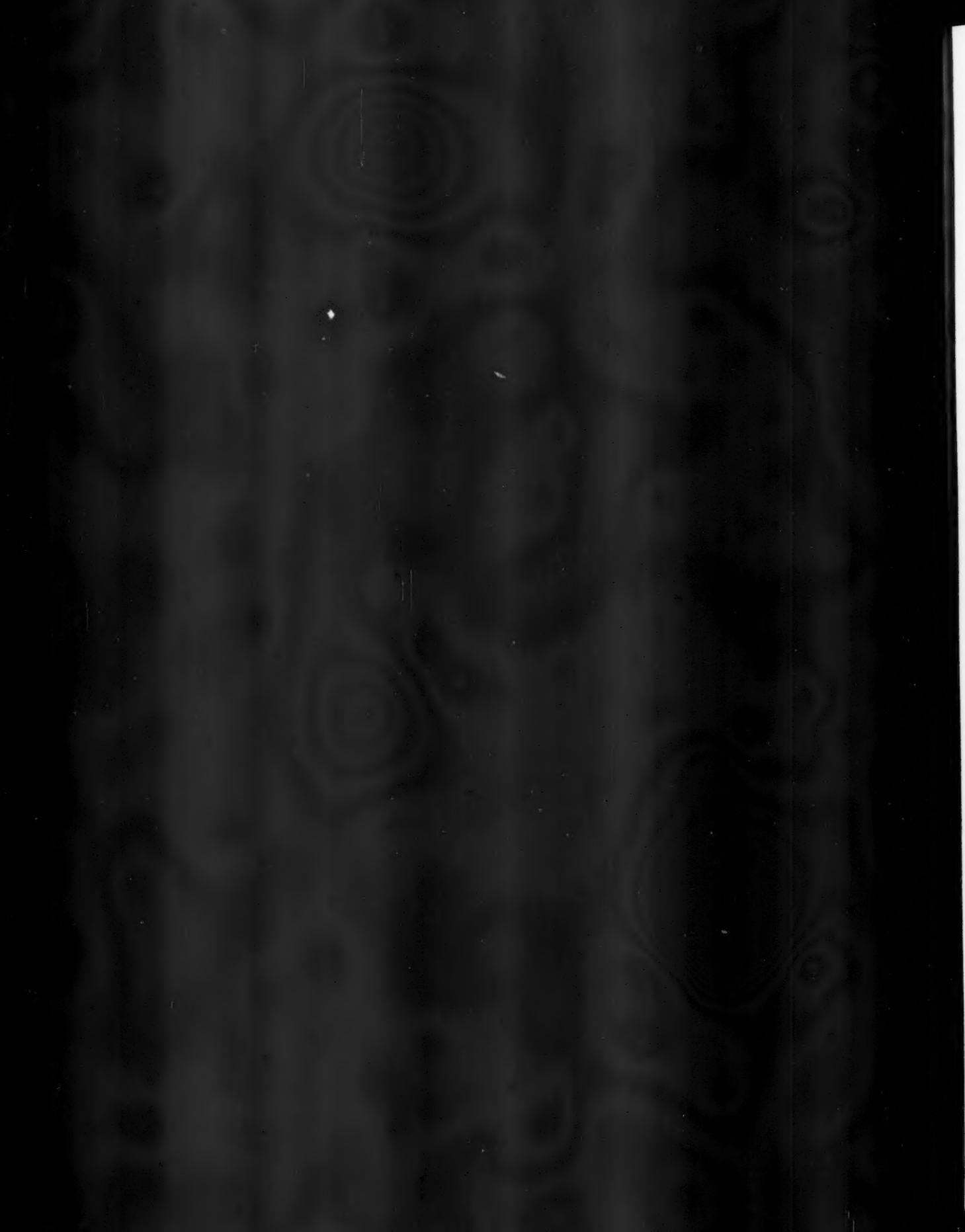

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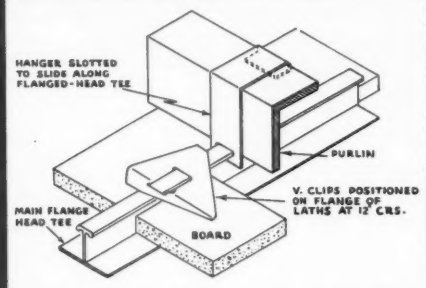
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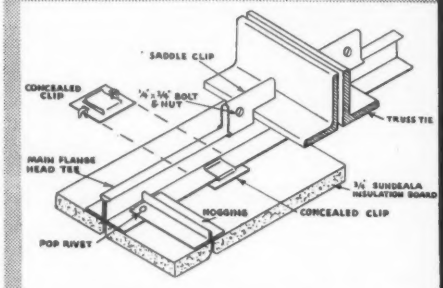

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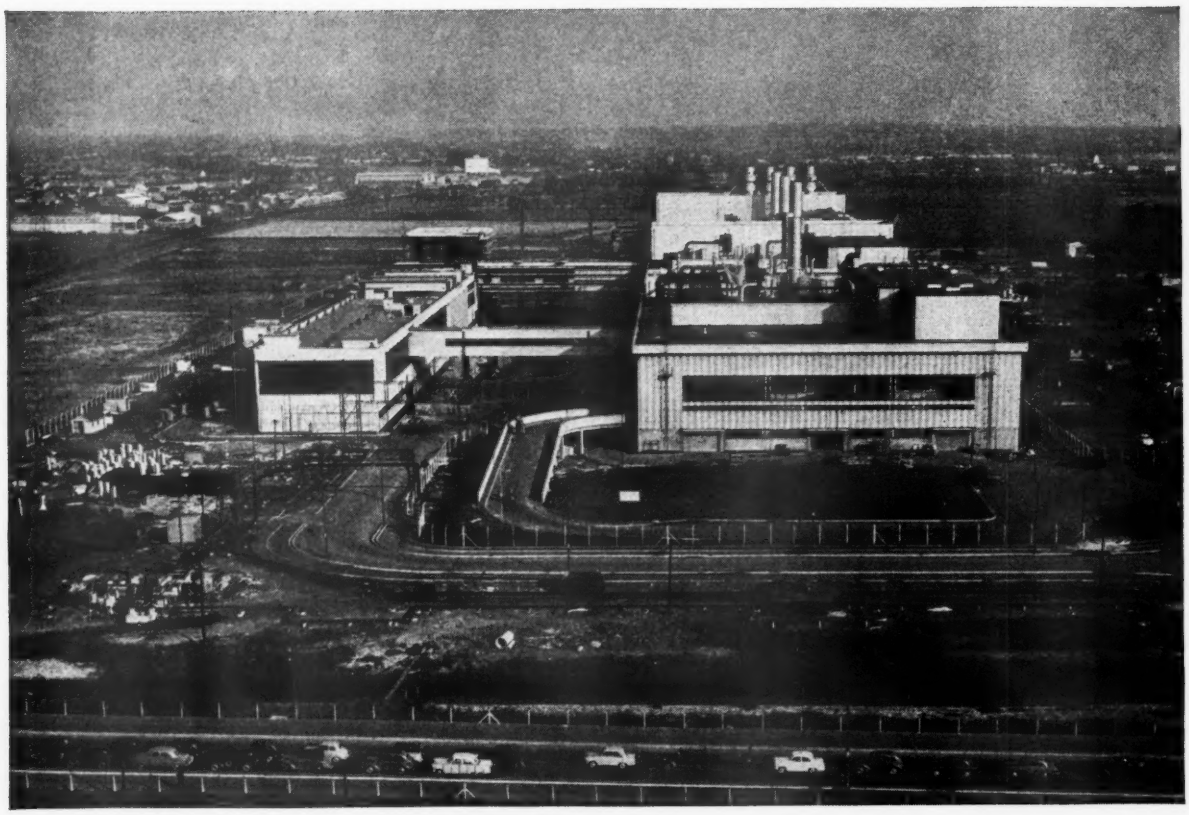

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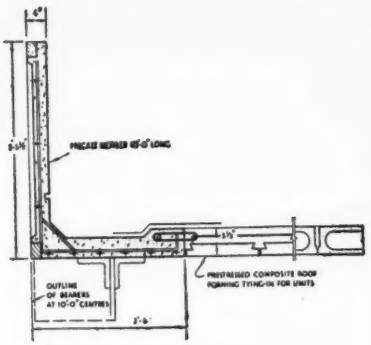

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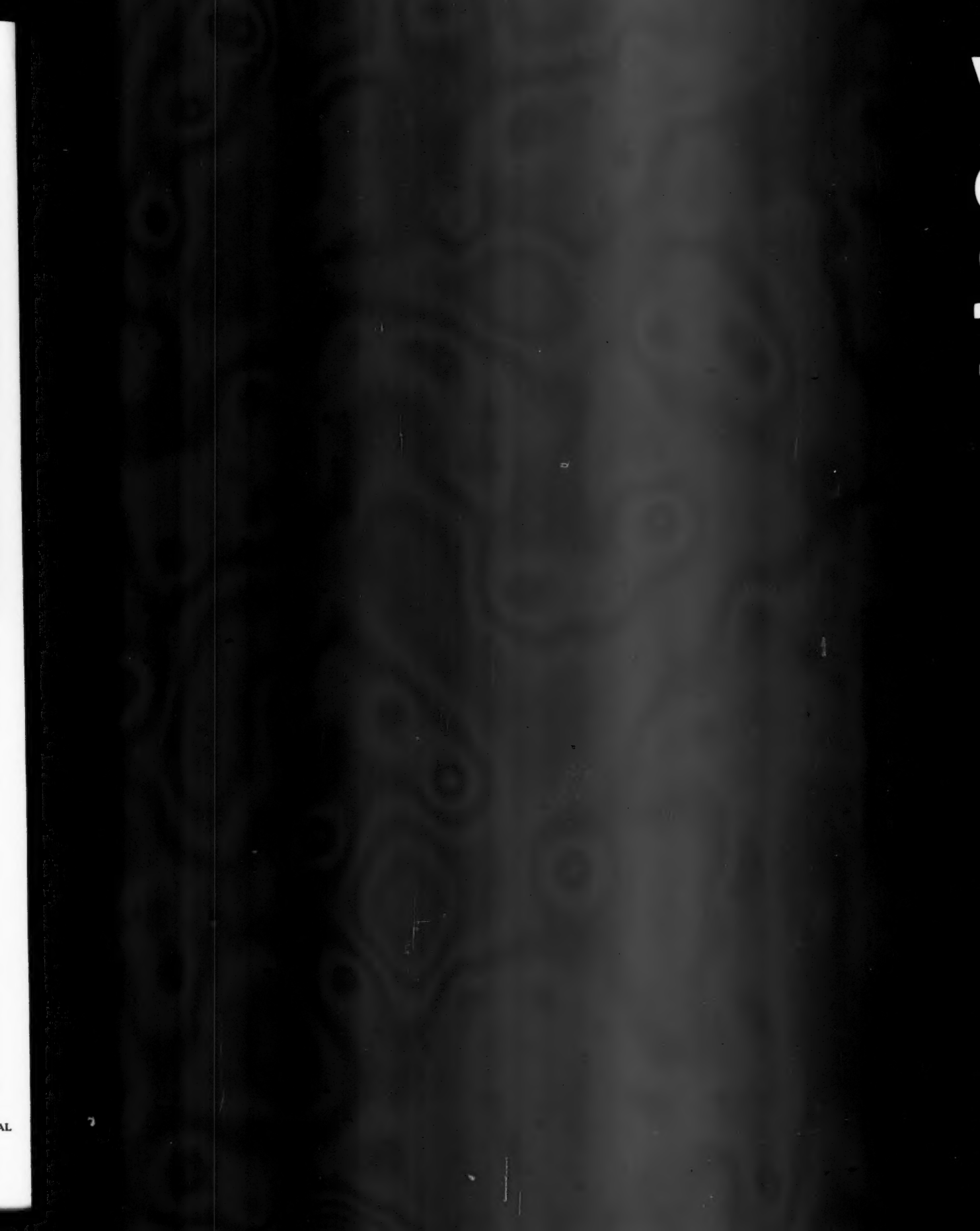

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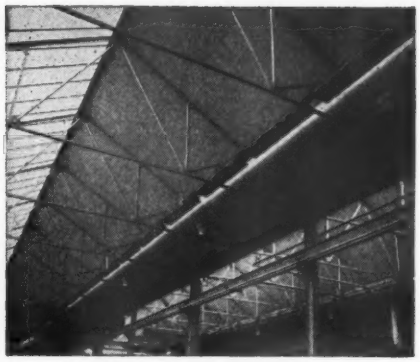

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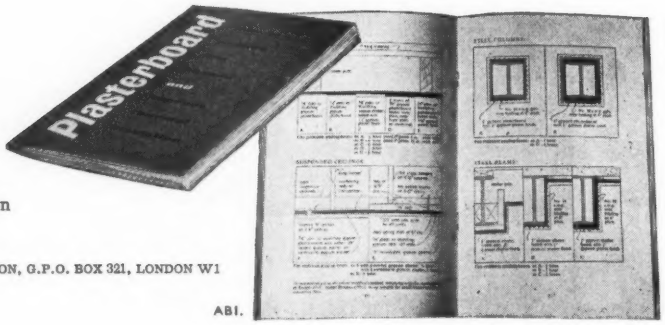

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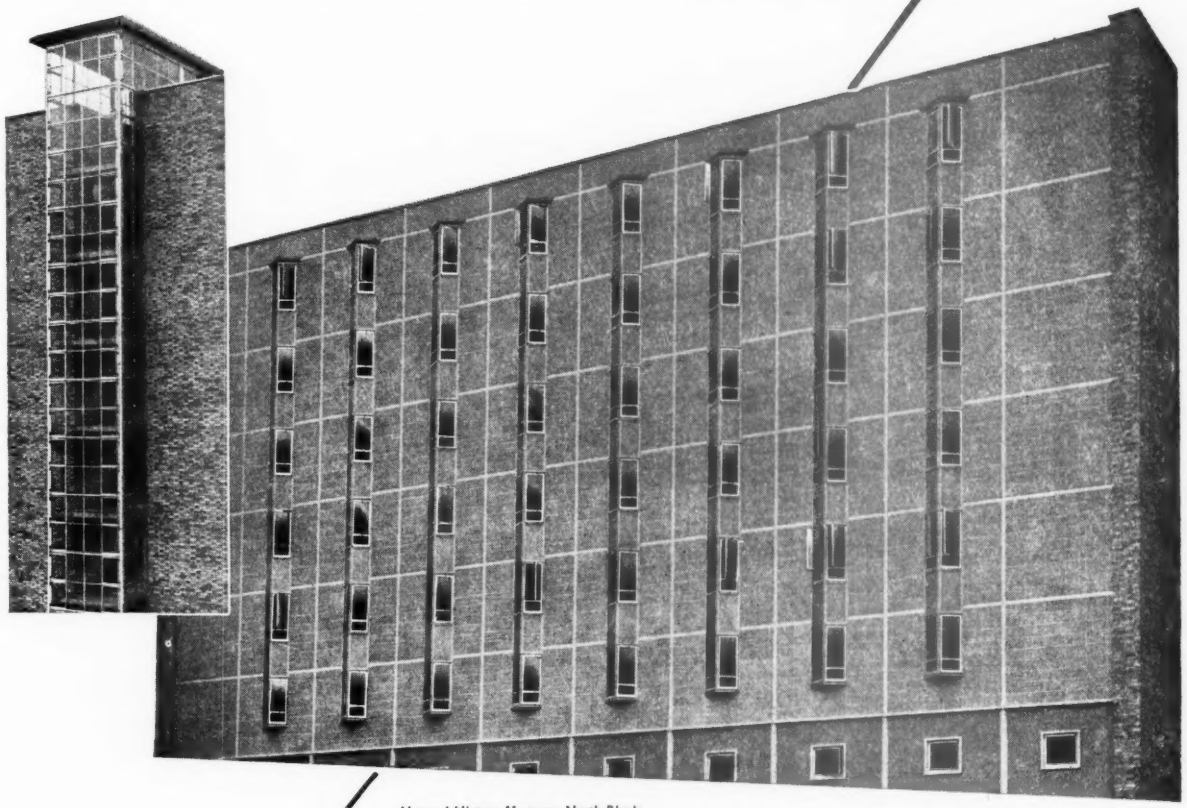

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Inset photograph shows South West Staircase windows constructed in aluminium.
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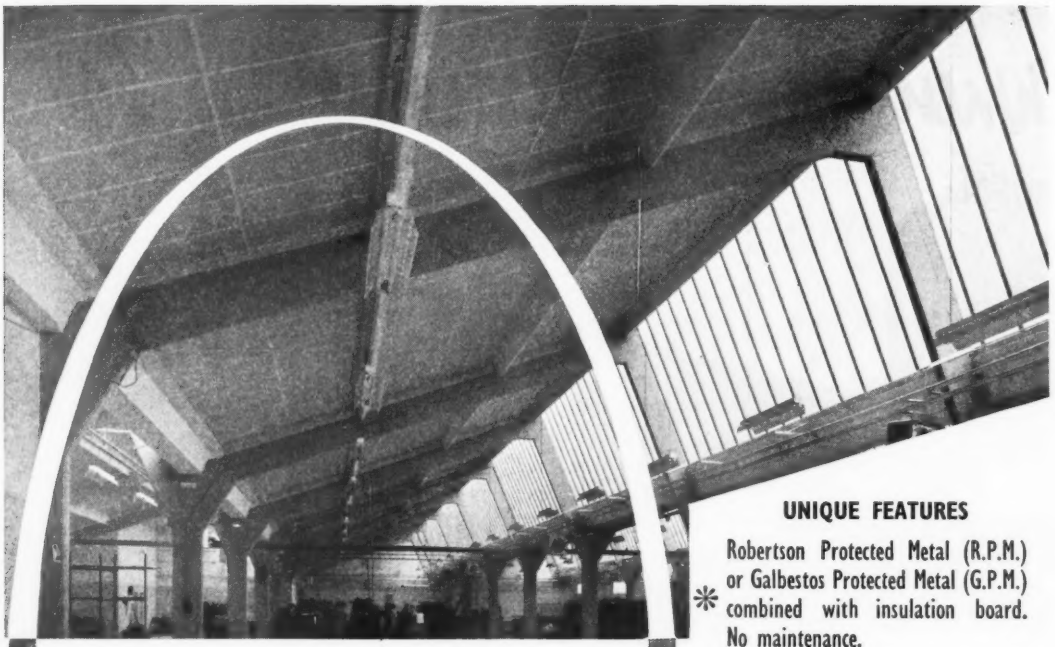

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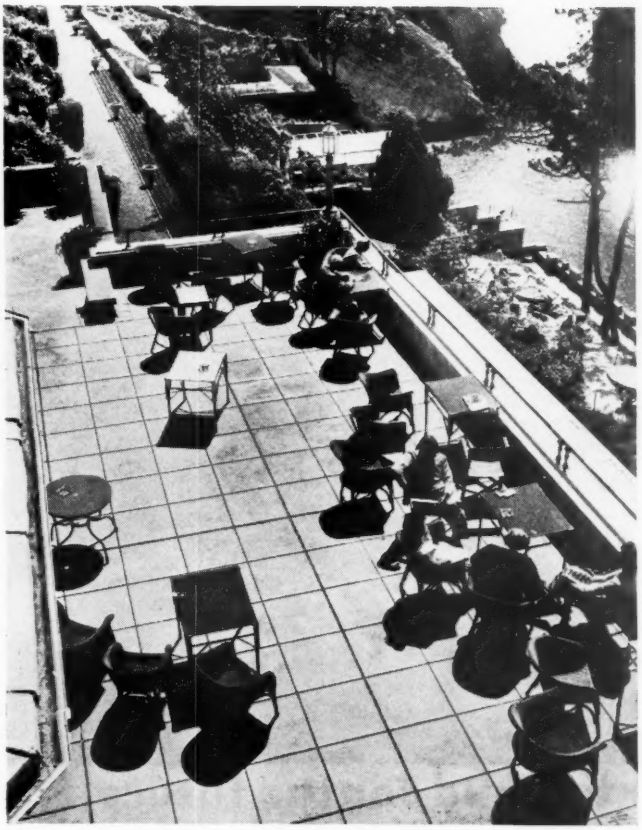

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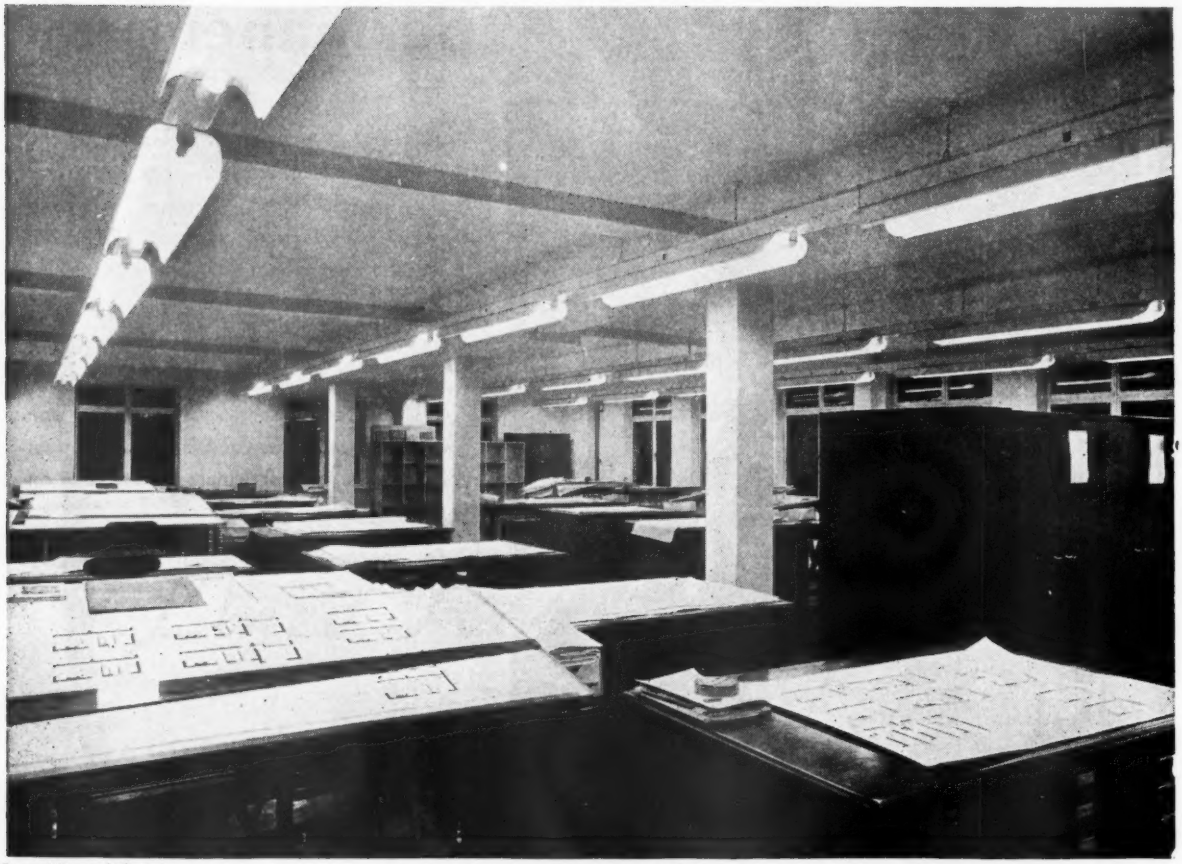

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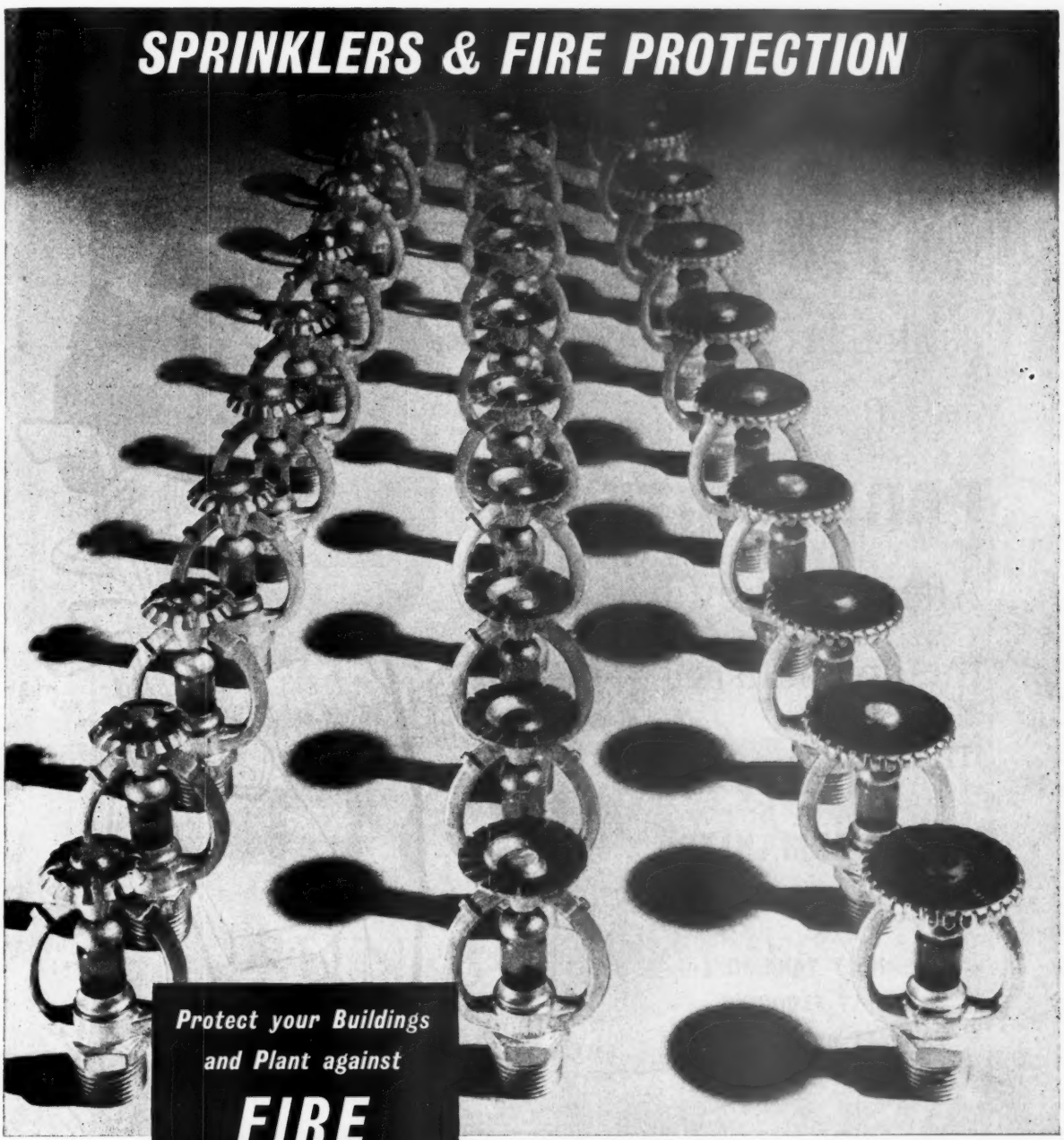

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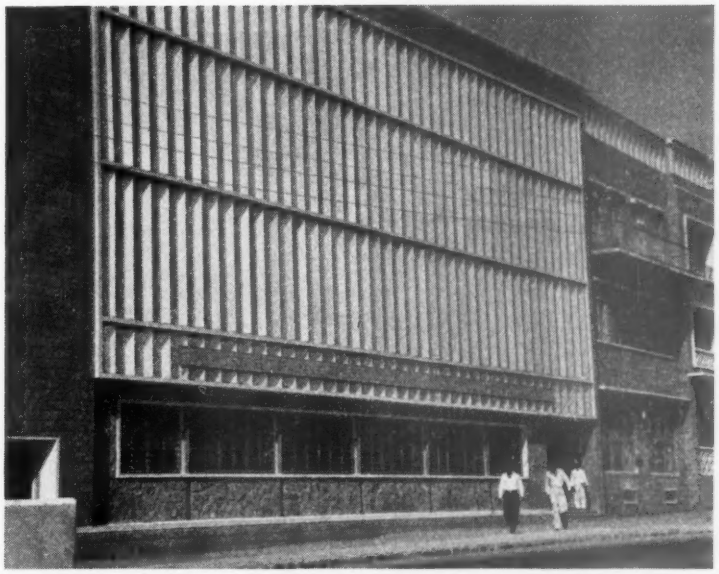

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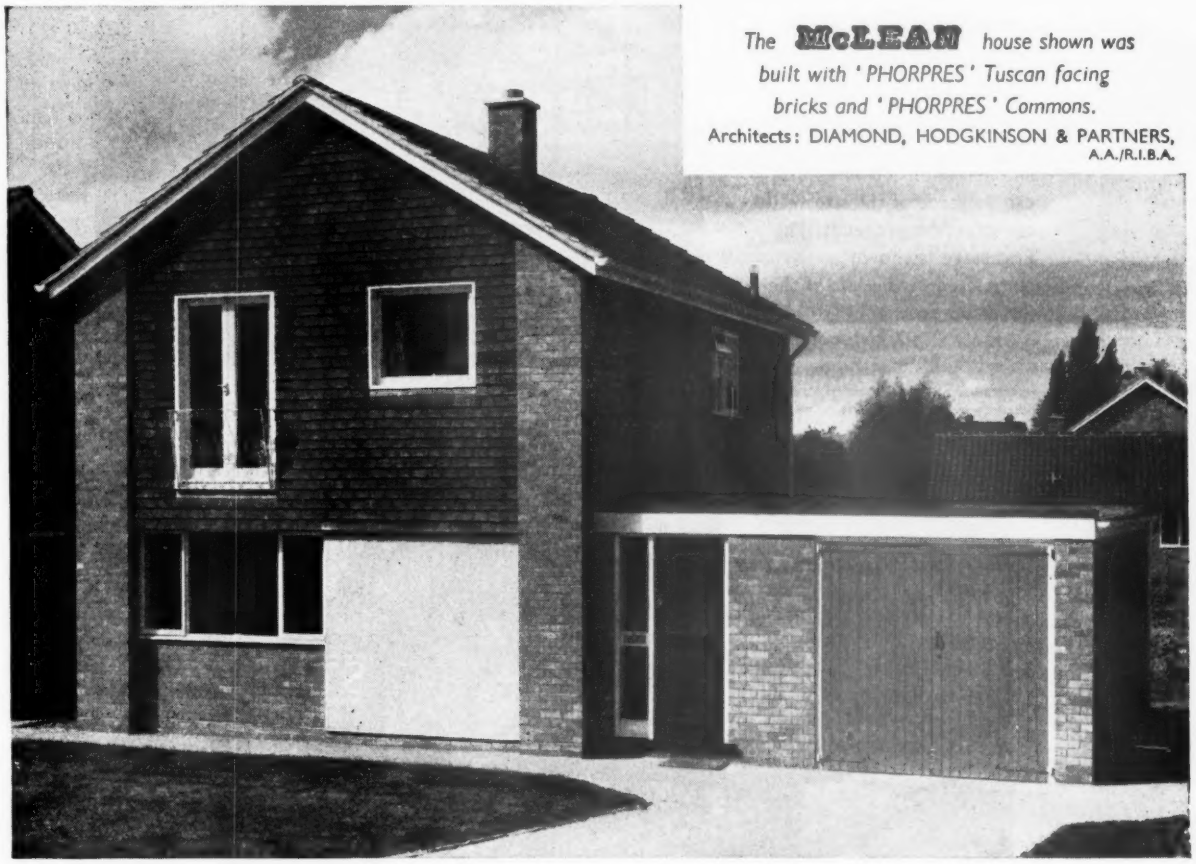

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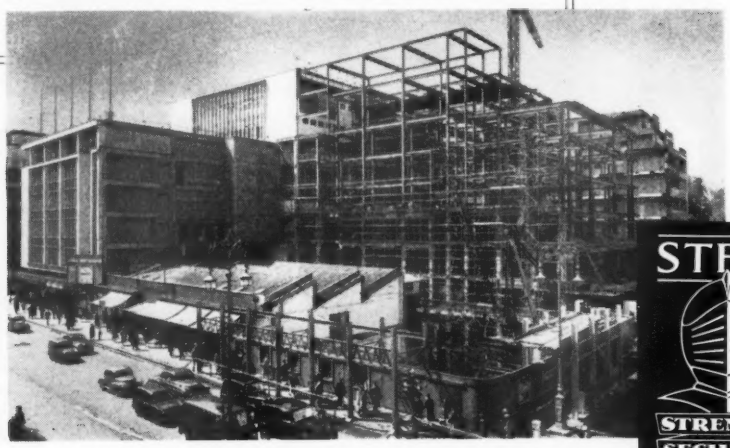
BY APPOINTMENT TO HER MAJESTY QUEEN ELIZABETH II BRICK MAKERS

STEEL

The new JOHN LEWIS store

This great store, which will cover an important island site adjoining Oxford Street, is being built in six stages, so arranged that the maximum business use can be made of the site while construction proceeds. The first stage is shown completed in the left of the lower photo.

Architects: Messrs. Slater & Uren, F/F.R.I.B.A.
Consulting Engineers: Messrs. Hurst, Peirce & Malcolm, M/M.I.C.E., M/M.I.Str.E.



B·C·S·A

BRITISH CONSTRUCTIONAL STEELWORK ASSOCIATION
ARTILLERY HOUSE, ARTILLERY ROW, WESTMINSTER, LONDON, S.W.1

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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FEBRUARY 1959 THIRD SERIES VOL. 66 NUMBER 4 THREE SHILLINGS AND SIXPENCE

EDITORIAL

New Year Honours List

Order of Merit. Field Marshal The Earl Alexander of Tunis, K.G., G.C.B., G.C.M.G., C.S.I., D.S.O., M.C. [*Hon. F*].

Companion of Honour. Sir Kenneth Clark, K.C.B. [*Hon. F*].

Knights Bachelor. Alderman I. J. Hayward, Leader of the London County Council. John William Laing. Robert Owen Lloyd, Past President, N.F.B.T.E. Dr. Douglas William Logan, M.A., LL.D., D.C.L. [*Hon. A*].

C.B. A. A. Part, M.B.E., Under-Secretary, Ministry of Education.

C.M.G. R. Cecil Cooke, Central Office of Information.

C.B.E. L. P. Ellicott [*A*], Ministry of Housing and Local Government. James Gardner, O.B.E., R.D.I. Edward Mills [*F*]. Professor J. M. Richards [*A*].

G.C.V.O. Sir Frederick Minter, K.C.V.O.

M.V.O. A. B. Knapp-Fisher, F.S.A. [*F*].

G.B.E. Sir John Balfour, G.C.M.G.

O.B.E. E. R. Bowyer, J.P., Member of the Joint Contracts Tribunal. Clifford E. Culpin [*F*]. C. J. Lansdell, Designer. C. G. Rowlands, Secretary, N.F.B.T.E. James Shearer, R.S.A. [*F*].

M.B.E. T. A. Bailey [*L*], Ministry of Works. W. T. Hall, Personal Secretary to the Architect to the L.C.C.

Arne Jacobsen Exhibition

An exhibition of the work of Arne Jacobsen, which will be opened by the Danish Ambassador, is to be presented at the R.I.B.A. from 26 February to 25 March (Mondays–Fridays 10–7; Saturdays 10–5).

Professor Jacobsen has been working on the preparation of the exhibition since last Spring and has had photographs specially taken for it. These together with plans and models will illustrate his architectural work since 1930, chiefly in the fields of housing, schools, industry and public buildings. Jacobsen has a high reputation as a designer of furniture, textiles, light fittings and table ware and examples of these are also included in the exhibition.

Professor Jacobsen has decided with regret that it will not be possible to tour the exhibition because of the difficulties involved in its special form of presentation.

Off to Africa

Mr. Basil Spence, President R.I.B.A., Mrs. Spence, and Mr. C. D. Spragg, Secretary, leave for Khartoum on Wednesday 4 March. Their plane is due to depart at 18.30 hours from London Airport North.

On behalf of all members, the JOURNAL wishes them *bon voyage* and a most successful tour.

At the time of going to press the complete programme had not been settled.

Building Research

The Lord President of the Council and the Minister of Works have decided that the Department of Scientific and Industrial Research should in future be the only Government Department with responsibility for building research. Hitherto the Ministry of Works has shared this responsibility through the Advisory Council on Building Research and Development. This Council, which was set up in 1947, and has made a most valuable contribution to the whole field of building research, will therefore not be continued after its present two-year period expires next month.

To ensure continuity of the important work previously undertaken by the Advisory Council, the Department of Scientific and Industrial Research will invite the various sections of the building industry to nominate representatives to a 'Standing Conference on Building Research and Development'. The terms of reference and further details of the operation of this Standing Conference will be announced later by the D.S.I.R.

The Ministry of Works will continue to provide the present service of advisory leaflets, lectures and the technical information service.

Royal Fine Art Commission

Mr. B. W. Watkin, M.A., A.M.T.P.I., has been appointed Deputy Secretary of the Royal Fine Art Commission.

Mr. Watkin has been working for the past seven years as a Field Officer with the National Parks Commission.

Felix J. Samuely

The JOURNAL records with great regret the death on 22 January of Mr. F. J. Samuely, M.I.C.E., M.I.Struct.E., after a short illness.

Council Business

The Council met on 6 January, with the President Mr. Basil Spence in the chair.

The Council approved a proposal made by the President that he should have a bust made to mark his term of office instead of having his portrait painted as was customary.

Sir Jacob Epstein has generously agreed to execute the bust for the same fee that would have been paid for a portrait.

The Building Research Station has been carrying out a survey of the long term durability of buildings and the R.I.B.A. building is one of those that has been investigated. The Council agreed to publication by the B.R.S. of a report on the R.I.B.A. as part of the survey.

The Council gave formal approval to the award made by the Jury appointed by the Federation of Malaya Society of Architects of the R.I.B.A. Architecture Bronze Medal in the area of the Federation for the three-year period ending 31 December 1957, in favour of the British Council Centre, Bluff Road, Kuala Lumpur, designed by K. C. Duncan [*A*], P.W.D. Federation of Malaya. The General Contractor was Lim Kah Ngam.

Other notes from the Minutes of the Meeting are given on page 144.

Joint Meeting at the I.C.E.

The Joint Meeting with the Institution of Civil Engineers* took place on 20 January in the Lecture Theatre of the I.C.E. which was packed out, many late-comers having to stand. The President of the I.C.E., Professor A. J. S. Pippard, thought it almost a record attendance and certainly a record for the number of speakers. Although there was no counting of heads, it was apparent that the engineers formed the majority.

It was not, however, the first joint meeting. There had been one in 1901.

Professor Pippard courteously invited Mr. Basil Spence to take the chair for the meeting and the President R.I.B.A. controlled it so perfectly that it finished dead on time. (A contrast to the 'Russian Evening' at the R.I.B.A.)

Mr. E. D. Jefferiss Mathews and Mr. Ove Arup each spoke for 15 minutes on 'The Architect and the Engineer' and 'The Engineer and the Architect', respectively, after which a succession of engineers and architects followed each other smartly to the rostrum to give five-minute contributions.

A full report of this lively meeting will be published in the Journals of the Institution and the R.I.B.A. for June, which conforms to the timetable drawn up by the I.C.E.

The Living Town

'The Living Town', a Symposium on the Replanning and Renewal of our Cities, is to be held on Friday, 22 May starting at 10 a.m. Full details will appear in later issues of the JOURNAL.

An exhibition on the same subject will be opened by the President at the R.I.B.A. on Thursday, 21 May.

* Institution of Civil Engineers 1910: Architect, James Miller, A.R.S.A. [*F*].

Curtain Raiser at the A.A.

A meeting was held at the A.A. on 30 December to discuss the architectural profession and the proposed R.I.B.A. constitutional changes. The meeting was in the nature of a curtain raiser to the R.I.B.A. Special General Meeting on 6 January.

It was a brilliant idea on the part of the A.A. to invite Dr. E. Grey-Turner to be one of the four opening speakers.

Dr. Grey-Turner is assistant secretary of the British Medical Association whose membership is around 70,000, one-third of which is outside the United Kingdom. He said that 75 per cent of the medical profession in Britain belong to the B.M.A. and went on to describe the services to the members, which by and large could be paralleled on a smaller scale by the R.I.B.A. Asked to say how the B.M.A. dealt with provincial organisation and how it was financed he said that the B.M.A. is organised in geographic divisions all over the country and that these are grouped into Branches, and the Branches into Constituencies for the election of members of the Council.

The great majority of the members of the B.M.A. Council are elected by the geographical constituencies with a certain number of *ex officio* members and others who represent special groups, such as the Public Health Service, the Armed Forces, etc.

The B.M.A. does not have the problem of local autonomous societies.

Dr. Grey-Turner told the meeting that the B.M.A. makes a handsome profit on its publications, and owns what he called the 'colossal building in Tavistock Square'—B.M.A. House—of which it occupies only the centre block and lets the north and south wings very profitably.

Having aroused the envy and admiration of the architects present, Dr. Grey-Turner cheered everyone up by admitting that in spite of all this his members were frightfully dissatisfied with the B.M.A., thought it hopeless as a representative association, quite useless and that it ought to be thoroughly overhauled. Do not, he said, make the mistake of imitating us!

A.B.S. Ball

The theme for the A.B.S. Ball in December was 'Old China' and the students' decor was up to its usual high standard. In addition gifts of scrolls and other examples of Chinese art were sent to the Ball from the Hongkong School of Architecture, many of which were afterwards sold to swell the profit.

The menus with their humorous advertisements and their attractive blue, orange and red plush covers were very much admired and these alone had made a profit of £2,500. It is known that the total profit on the Ball will be higher than last year's figure of £3,600. This will be a considerable help towards the second stage of the building of the Old People's Homes. Work on seven more bungalows starts in the Spring of this year.

The members of the Ball Committee under the Chairmanship of Mr. C. J. Epril and Mrs. A. Wolfe, Hon. Organising Secretary, are to be congratulated on another very successful occasion.

Reorganisation at Ministry of Housing and Local Government and Ministry of Health

The Minister of Housing and Local Government and the Minister of Health have decided that in future their Ministries should have separate architectural establishments. At present, the architects working on behalf of the Ministry of Health are part of the staff of the Ministry of Housing and Local Government, and the Chief Architect of the Ministry of Housing and Local Government, Mr. J. H. Forshaw, C.B., M.C., Vice-President, R.I.B.A., acts also for the Ministry of Health.

The Ministry of Housing and Local Government is to reorganise its architectural work, and is seeking a new Chief Architect to carry this through. The Ministry says that it wants to give its architects more opportunities for constructive work and for developing new ideas.

In particular the Ministry wants to establish a housing development group which will be able to demonstrate the results of its researches into housing design and constructional techniques by building houses and flats, as well as by publications. It is hoped that the work of this group will offer considerable scope for influencing the design and costs of houses in both public and private fields.

Mr. Forshaw is remaining with the Ministry as Architectural Consultant to advise on particular design problems. He is whole-heartedly in support of the reorganisation, but he believes that a younger man should take charge of the developments, since they will necessarily take some time to carry into full effect.

The Ministry of Health's Chief Architect is to take charge of the staff engaged on the examination of the building schemes of Local Health Authorities and of Hospital Boards. The hospital programme, as the Minister of Health announced recently, will reach a level of £25,500,000 in 1960–61. The Chief Architect will also be responsible for a Design Unit which is studying various aspects of the design, both of hospitals and other buildings connected with the Health Service, with a view to securing efficient and economical planning and construction. This Unit has already published one such study—on the design of operating theatres—and others are in course of preparation, and further ones planned.

Symposium on Laboratories—II

There are still some tickets available for the two-day Symposium to discuss more detailed requirements of Laboratories which has been arranged by the Science Committee for Thursday 19 and Friday 20 February.

Tickets at £1 10*s*. (Students 15*s*.) are available from the Secretary, R.I.B.A., and the price includes for tea on both days, but not lunch. The Chairman is Richard Sheppard [*F*].

The programme is as follows: each speaker will briefly introduce his paper, which will be followed by discussion.

19 *February*, 2–5.30 *p.m.*: 'Planning bench-type teaching laboratories', by Anthony Cox [*F*]. 'Laboratory design for school chemistry', by W. H. Lloyd, B.Sc. 'Planning bench-type research laboratories', by R. Llewelyn Davies [*F*], J. Musgrove [*A*] and R. G. Hopkinson, Ph.D., B.Sc.(Eng.), M.I.E.E., F.I.E.S.

20 *February*, 10.15–12.30 *p.m.*: 'Equipment and services in bench-type laboratories', by W. H. Pritchard. 'Adaptability in laboratory planning', by E. D. Jefferiss Mathews [*F*]. 2–5.30 *p.m.*: 'Equipment and services in workshop-type laboratories', by K. J. Jarvis, B.Sc., A.M.I.C.E., A.M.I.Mech.E. 'Planning workshop and larger scale laboratories', by H. A. Snow [*A*].

Le Corbusier Exhibition

In connection with the current Le Corbusier Exhibition at the Building Centre the following informal evening talks are being given on Thursdays at 5 and 6 p.m. as follows: 12 February: Jane Drew [*F*] and Reg. Butler; 19 February: Peter Smithson [*A*] and Ernö Goldfinger [*L*]; 26 February: Fello Atkinson [*A*] and T. B. Harper Ellis [*A*]; and 5 March: James Stirling [*A*] and Sir John Summerson [*A*].

Admission is free but numbers may have to be restricted as space is limited.

The exhibition closes on 6 March.

Index to Practice Notes

An index to Practice Notes published in the JOURNAL from January to December 1958 has been prepared and copies may be obtained free of charge on application to the Secretary, R.I.B.A.

R.I.B.A. Diary

TUESDAY 17 FEBRUARY, 6 p.m. General Meeting. *An Architect Looks at America*, by Mr. N. Keith Scott, M.A., B.Arch., Dip.C.D. (L'pool), A.M.T.P.I. [*A*].

THURSDAY 19 and FRIDAY 20 FEBRUARY. Symposium on *Teaching Laboratories*—II.

TUESDAY 10 MARCH, 6 p.m. General Meeting. *Royal Palaces in England from Norman to Victorian Times*, by John Charlton, M.A., F.S.A.

The Royal Gold Medal for Architecture 1959

Her Majesty the Queen, on the recommendation of the Royal Institute of British Architects, has awarded the Royal Gold Medal for Architecture for 1959 to Professor Mies van der Rohe, United States of America.

This is the seventh occasion on which the Royal Gold Medal has been awarded to an American architect.

Ludwig Mies was born in Aachen in 1886. He himself added van der Rohe, his mother's name. His father was a master-mason and so he acquired as a boy a knowledge of the possibilities and limitations of stone as a building material. He attended the Cathedral School in Aachen and at fifteen went to the trade school for two years, first as an apprentice and then as a draughtsman for local architects and designers: he never had any formal architectural training.

In 1905 he went to Berlin and was employed by an architect designing in wood. Later he apprenticed himself to Bruno Paul, the furniture and cabinet designer, where he remained for two years. He left Paul to work as an independent architect, building his first house—the Riehl house—in 1907.

In 1908 he worked as a draughtsman and designer for Peter Behrens, whose office became a training ground for the modern generation of architects. Here he gained much practical experience

including the supervision of the construction of the German Embassy at St. Petersburg. As an apprentice to Behrens he helped with the design for a house for Mrs. Kröller and later, after leaving Behrens' office, he spent a year at The Hague at Mrs. Kröller's invitation designing his own version of the house, but it was never built although a full-scale mock-up was erected on the site. In 1913 he returned to Berlin and opened his own office where he worked on designs for several houses.

On returning from the war he published in 1919 a series of remarkable projects which established his reputation. From then until 1925 he was concerned with a number of activities: he wrote articles; he financed the first three issues of the magazine 'G'; he was a member of the 'Novembergruppe' and organised exhibitions. His first post-war commission was for a large house in Neubabelsberg, built in 1924, and in 1925 he built a group of low cost apartments for the city of Berlin. Five houses were built between 1925 and 1929 and also a monument, since destroyed, to Karl Liebknecht and Rosa Luxemburg in brick, a material he had come to admire in The Hague and which was little used by other designers at that time.

In 1926 Mies van der Rohe was appointed First Vice-President of the Deutscher Werkbund, an organisation set up in 1907 to improve the quality of German industrial design. In 1927 the second exhibition organised by this organisation was held at Stuttgart under Mies's direction—the famous Weissenhofsiedlung. The foremost European architects were invited to take part including Gropius, Le Corbusier and Oud and the architecture of this exhibition was referred to as the new 'international style'.

Between 1928 and 1929 he worked on projects for office buildings and also for the layout of Alexanderplatz in Berlin. In 1929 the International Exposition was held at Barcelona for which Mies designed the German pavilion, illustrating his concept of flowing space, and it was acclaimed by architects and critics as a milestone in modern architecture. In 1930 his well-known Tugendhat house at Brno in Czechoslovakia was built, again illustrating the idea of flow of space.

From 1931–38 he worked on projects for 'court-houses' and designed five adaptations but only one of these was built. In 1933 he was invited with twenty-nine other architects to enter the competition for the new Reichsbank in Berlin and his design was the only modern one amongst the six prizewinners.

In 1930 he was appointed Director of the Bauhaus School in Dessau, at the instigation of the former Director, Walter Gropius, but for political reasons this had to be moved to Berlin in 1931 and in the autumn of 1933 he decided to close the school.

He left Germany in 1938 for America: in 1944 he became an American citizen.

In 1939 he was appointed Director of Architecture of Armour Institute, as the Illinois Institute of Technology was then called, and was shortly afterwards commissioned to design the new campus. This was a vast scheme to be developed over the years—in 1942 Chemical Engineering and Metallurgy Building; 1945 Alumni Memorial Hall; 1950 Boiler Plant; 1952 Chapel; 1953 Commons I.I.T.; 1955 Architecture and Design Building. He has recently retired from this post at I.I.T.

He had come to America at the invitation of Mr. and Mrs. Resor and during his first year projected a house for them in Wyoming, the design being based on a 'floating cage', a completely new departure from his last European domestic project. The Farnsworth house designed some years later was another interpretation of this theme. Apart from his commissioned work he also worked on a number of projects—in 1942 a project for a museum for a small city and in 1943 a project for a concert hall. He had earlier been interested in furniture design and now made a study of the use of plastics for furniture from which evolved his 'conchoidal' designs.

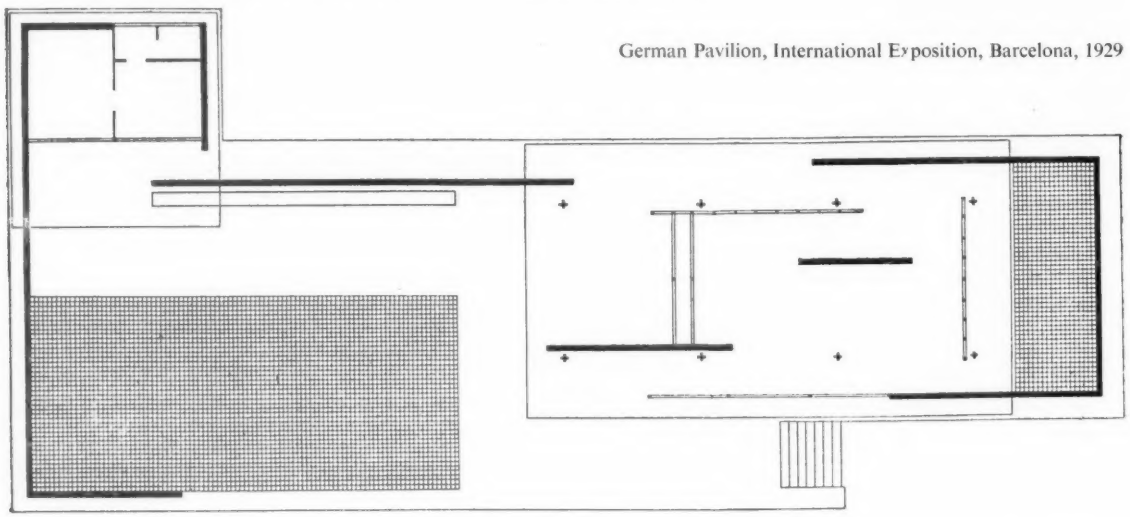
In the last ten years he has designed a number of blocks of apartments, notably, the 'Promontory Apartments' in Chicago in 1948, the apartment houses at 860 Lake Shore Drive in 1951, the 'Commonwealth Promenade Apartments' and the '900 Esplanade Apartments' in 1957.

1958 saw the completion of the Seagram Building, a 37-storey office block, and his first building in New York which he designed in association with Philip Johnson—many critics regard this as his masterpiece.

Another office building was designed for Santiago de Cuba and other work during the last five years includes a project for the National Theatre in Mannheim, the proposed design for the Convention Hall, Chicago, a project for an addition to the Museum of Fine Arts at Houston, and a project for a residential development scheme 'Lafayette Park Urban Renewal' in Detroit.

Mies van der Rohe is a fellow of the American Institute of Architects and of the American Academy of Arts and Sciences, a member of the Russian Academy of Art and of the Mexican Society of Architects, and Honorary Corresponding Member of the R.I.B.A.

He has received the medal of honour of the Congress of Pan-American Architects, the award of merit of the Ruskin Society of America, and the Feltrinelli International Prize for Architecture, Rome.



German Pavilion, International Exposition, Barcelona, 1929

The German Pavilion designed by Mies van der Rohe for the International Exposition at Barcelona in 1929 is considered by many critics to be the culmination of his European career. Its components are simple: steel columns and independent rectangular planes of various materials placed vertically as walls or horizontally as roofs, arranged so that space is allowed to flow continuously and is never confined.

The Seagram Building, New York, 1958, is a 37-storey office block, designed in association with Philip Johnson.

MIES VAN DER ROHE
Address to
Illinois Institute
of Technology: 1950

Technology is rooted in the past.
It dominates the present and tends into the future.
It is a real historical movement—
one of the great movements which shape and
represent their epoch.
It can be compared only with the Classic
discovery of man as a person,
the Roman will to power,
and the religious movement of the Middle Ages.
Technology is far more than a method,
it is a world in itself.
As a method it is superior in almost every respect.
But only where it is left to itself as in
gigantic structures of engineering, there
technology reveals its true nature.
There it is evident that it is not only a useful means,
that it is something, something in itself,
something that has a meaning and a powerful form—
so powerful in fact, that it is not easy to name it.
Is that still technology or is it architecture?
And that may be the reason why some people
are convinced that architecture will be outmoded
and replaced by technology.

Such a conviction is not based on clear thinking.
The opposite happens.
Wherever technology reaches its real fulfillment,
it transcends into architecture.
It is true that architecture depends on facts,
but its real field of activity is in the realm
of significance.
I hope you will understand that architecture
has nothing to do with the inventions of forms.
It is not a playground for children, young or old.
Architecture is the real battleground of the spirit.
Architecture wrote the history of the epochs
and gave them their names.
Architecture depends on its time.
It is the crystallisation of its inner structure,
the slow unfolding of its form.
That is the reason why technology and architecture
are so closely related.
Our real hope is that they grow together,
that someday the one be the expression of
the other.
Only then will we have an architecture worthy
of its name:
Architecture as a true symbol of our time.

Special General Meeting

Held at the R.I.B.A., 6 January 1959

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., President, in the Chair

The President: This is a Special General Meeting called for the purpose of considering the Interim Provisional Report of the Constitutional Committee and receiving the Council's report on the financial situation.

It cannot be too strongly emphasised that the Report of the Constitutional Committee is a progress report. The Committee was set up by the new Council at their first meeting in July, and has met at frequent intervals in the intervening period. The conclusions set out in the Interim Report are by no means final, and there has been no opportunity for the Council to consider them in detail. The Allied Societies and members as individuals have been invited to submit their comments for consideration by the Constitutional Committee.

This Special General Meeting gives us an opportunity to express our views on the thoughts which have guided the Constitutional Committee in reaching the provisional conclusions which are before you. The views which you express will be most useful to the Committee in their continuing study of the complex problems involved. Many of the questions at issue are interrelated, and it may well be that some of the provisional conclusions will have to be modified in the light of further study of the opinions expressed. For these reasons you will agree that it would be wrong to pass formal resolutions at this meeting, but we hope to get expressions of opinion on some or all of the questions dealt with in the report.

Mr. Cleeve Barr is the Chairman—the very hard-working Chairman—of the Constitutional Committee, and he will take you through its report and, with the members of his Committee, deal with the questions which are raised. As a matter of procedure, however, I propose that we take the Financial Statement first. The Hon. Treasurer will summarise it briefly and answer questions. I ask you to help the Constitutional Committee by making constructive suggestions. The Committee is anxious to get the real tenor and temperature of opinion throughout the profession, and we can help it by expressions of opinion, and not really by a debate, because I hardly think that that is called for at this stage. We must realise that this is one of the most important matters discussed in recent years.

FINANCIAL STATEMENT

The Hon. Treasurer (Mr. E. D. Jefferiss Mathews): I should like first to express publicly my appreciation of what has been done by members of my Committee, who have worked very hard indeed to prepare this report, and also of the work of the staff of the Royal Institute. I would particularly thank the staff on the financial side, led by Mr. Bevan, for the work they have done.

This review of the financial situation has been published in the JOURNAL, and copies are on the seats this evening. I propose to go very briefly through the principal points, and then I hope that members will ask questions.

From para. 4 it will be seen that the Committee reported to the Council that the position in which the Institute found itself in 1957 was not by any means solely connected, as has been represented, with the building programme. Apart from building operations, assuming the development of the activities of the Institute on the lines then, and the continuation of subscriptions at the rate operating up to 31 December last, we should have had building up a deficit over the next few years irrespective of any loan or any interest paid on it.

In para. 5 we outline the present position. We have had a difficult year, as was made clear at the last Annual General Meeting, due to the fact that a great deal of the contemplated expansion of the activities of the Institute has taken place, but the increase in the subscription rates did not become operative until 1 January this year. As most people know, we had to husband our resources very carefully during the past year, with the result that the situation in which we now find ourselves is a good deal more satisfactory than we expected. We also take account of the overall improvement in the national economy (since it has a very considerable bearing on our finances). We are very conscious of the need to develop and increase the activities of the Royal Institute in all spheres in the interests of members, and we realise that as far as possible that must be the first call upon our financial resources.

Since the last review the statistical department of the Royal Institute has been set up. That has been extremely valuable, but it has to be paid for, as have all our activities. We have achieved considerable results from its guidance, as will be seen from this report, and it has thrown a different light on the problem from that given by the rule-of-thumb methods available before. The statistical survey which has been made has indicated that, contrary to our original expectations, there is a continued rise in membership, and that this trend is likely to continue even when taking account of various impending measures such as the putting into operation of the recommendations of the Oxford Conference for raising the level of general education required for entry. That will almost certainly reduce the entry into the profession, and ultimately entry into the corporate membership of the Institute; but, after taking all these things into consideration, the figures given in the report show, surprisingly, that by 1961 we shall have 19,350 corporate members, and that number will continue to rise, though at a slower rate than before.

A very heartening reason for this is that we are a youthful profession. Personally, I was delighted to be told this, because for one reason or another I had begun to doubt it; but we are told definitely that we are a youthful profession, mainly due to the increase in membership immediately after the war, making the bulk of the membership young. We are also told that an increased length of life for architects is expected in the future, which again is surprising, though pleasant.

With those considerations in mind—and it will be obvious that I have touched only briefly on the very lengthy study which has been made by the officials of the Institute and by the Committee—we were able to recommend to the Council (para. 6) a change in the financial policy adopted in December 1957. In para. 6 we set out the three main principles which we recommend, and which the Council have now approved:

'(i) *that balances of income over expenditure shall be paid to a Development Fund to be used as the Council may from time to time direct;*
(ii) *that, subject to the Council's direction as stated above, the loan for the capital expenditure on the building shall be allowed to run its full term of* 20 *years;*
(iii) *that budgets for expenditure against carefully anticipated income should, within the principles of* (i) *and* (ii) *above, be aimed at a steady progressive development of the Institute's activities in the interests of members.*'

Those are the changes in policy which the Council have seen fit to adopt in the light of the review and the position as we now see it, which has been due to careful husbandry and to some unfortunate restrictions on expenditure during the past year.

In para. 7 we make rather more detailed comments on some of the more important aspects of the subject. Obviously the most important is the first. The Committee recommended to the Council and the

Council approved that the increased subscription rates and entrance fees and examination fees which the Council adopted in 1957 should be continued. We are fully aware that this is unfortunate, but it has to be viewed as part of the overall picture. We are a growing Institute, with a growing membership which rightly requires greater service from the Institute. It is essential that we should operate on some margin. A number of factors are beyond our control, such as for example the cost of postage, which has a very big effect on us, and the cost of printing. Overall items in the national economy can very seriously affect us, as we have seen in the past, and particularly in 1956–57. Unless we have some cushion to absorb the effect of those items of expenditure which may be forced on us, it is obvious that our financial position cannot be regarded as satisfactory. To achieve this, the Council have very definitely though regretfully decided that the increases in subscription and in examination and entrance fees must remain at the level which became operative on 1 January this year.

We have been able to restore to the Public Relations Committee a great deal of what they lost by unfortunate reductions during the past year. In particular we have been able to restore to them what is in some ways more important than money, a three-year programme of expenditure with their own resources in that period allocated to them regardless of whether or not they spend them in any one year. I know that that makes all the difference to a constructive and progressive plan of public relations activity.

We have taken account of further developments on the Professional Relations side of the activities of our Institute, and also on the Science Committee side.

With regard to the rebuilding of our premises, we have been able to bridge the gap between the loan and our own resources in a way which eighteen months ago we did not expect would be possible. That is due to a number of factors. The actual cash demand was less than we expected, or perhaps it would be better to say that it came in more slowly than we expected, with the result that money could remain invested longer, and there was an improvement in the investment value of that money. These things have had a cumulative effect which has enabled us to bridge the gap between the loan and our own resources in the 1958 accounts, so that we now start with a clean sheet in respect of our building, with the exception of the 20-year loan. That loan can be reduced by the decision of the Council. There is nothing to prevent the Council at any time, if they wish to do so, allocating money from the Development Fund for the reduction of the loan. The loan is also self-reducing by the nature of the amortisation provisions, so that it is a gradually reducing interest and amortisation fund.

The Development Fund is dealt with in para. 7 (vi), and I do not think that I need add to what I have already said about it, except by saying that it is probably not known to a great many members that we have at the Royal Institute no free reserve monies. All our invested funds are trust funds in connection with prizes, education and so on, and cannot be used for ordinary purposes, so that this Development Fund will begin to provide the Royal Institute with the reserve which it needs, quite apart from providing a cushion against unforeseen expenditure and giving the Council a means of making ad hoc expenditure in any year for purposes which cannot be anticipated. A recent example was in connection with the Le Corbusier exhibition, to which we made a contribution, and which was unknown at the time when the budget was prepared. We hope that the Development Fund will be built up and not expended by the Council every year—though that is a matter for the Council—so that it will provide us with a reserve.

That is a brief review of the position, which has been accepted by the Council. The rest of the report deals with the estimates for the years 1958–61. That is put forward here because it was felt to be right to give the membership at this time a picture of our forward planning, but it is really more appropriate to the Annual General Meeting, before which it will come. Unless members specifically wish to ask questions about it, I do not propose to summarise it now.

Paras 13 to the end of the report give a general review to 1961. It is obvious that there will always remain unforeseen expenditures, both within our control, for purposes with which we shall be rightly faced, and outside our control. To budget forward on a three-year plan, therefore (which is now the policy), must be speculative and to some extent the subject of probably considerable variations. We have endeavoured to anticipate the membership trend, which may be affected by the increased subscriptions, by emigration, by the tendency for architects to go into commerce and so on. The effect of the Oxford Conference decisions on the intake into the profession has also to be considered. But some uncertainty must always remain, and I should like to clear up one or two points which have already been made in the Press.

There will be the effect on the Institute's finances of the recommendations of the Constitutional Committee. As Mr. Cleeve Barr will tell you, since its report was published that Committee has been considering the financial implications of its recommendations. I believe it is right to say that the fear that those recommendations may have a major effect on the Institute's finances can be reduced, if not avoided altogether, without in any way affecting the progressive developments recommended by the Constitutional Committee.

The President: We now invite you to ask questions.

Mr. L. O. Woodward [*L*]: May we be told the approximate number of the salaried staff of the Institute, including the Library staff?

The Hon. Treasurer: Approximately 80 at the present time. That includes the domestic staff.

Mr. Woodward: So that the average total emoluments of the staff will be some £800 to £900 a year?

The Hon. Treasurer: It is a difficult calculation to make, because it involves elements of pension contribution and so forth. I think it is slightly more than the figure which you gave.

Mr. Woodward: Rather more than £900?

The Hon. Treasurer: Yes.

Mr. Eric Ambrose [*F*]: In the first draft of the accounts published last year a loss was shown against the R.I.B.A. JOURNAL. I made inquiries before the meeting and was told that this was a mistake, and at the meeting an explanation was given and it was said that the JOURNAL actually made a profit, and this was shown in the accounts of the Library.

There are two questions which I should like to ask. First, is it true that we pay 25 per cent of the gross receipts to the advertising manager for his services? I cannot find out the gross receipts, but I understand that the amount paid to him is between £10,000 and £15,000. If that is so, it is a very large amount. That is based on hearsay. If it is true, it does not seem to be a very realistic situation.

The Hon. Treasurer: There are difficulties due on the one hand to the peculiarities of accountancy, and on the other to the fact that it is difficult to describe in words what is a very simple operation. The JOURNAL expenditure carries with it considerable sums connected with the issue of the Library Bulletin, the Annual Report and the Building Research Station Digest. The JOURNAL does not show its own postage, which comes out of the overall postage of the Institute. If postage and these three items which I have mentioned, which are strictly not JOURNAL matters, are excluded, the JOURNAL does not run at a loss.

On the other question, it is true that the advertising manager is paid on the basis of a 25 per cent commission on the net revenue received from the advertisements, and the sum of money which Mr. Ambrose mentioned is approximately correct, but there are one or two things which must be understood. The first is that out of that commission the advertising manager pays his entire staff, his printing, his normal business postage, his office equipment, travelling expenses, and entertainment expenses—and anyone who knows anything about handling advertisers will expect that to be a very big sum. Secondly, it is easy to criticise this arrangement at this stage, when, in spite of the views of some people, the JOURNAL is a success. Most people do not know what happened, but I have delved into the history of this matter and can say that prior to the

appointment of Mr. O'Shaughnessy, the advertising agent, in 1933 the JOURNAL was running at a loss and was as dead as a doornail. You may think that it is not alive now, but at any rate it has gone beyond the doornail to, say, the tintack stage, taking the worst view of it, and personally I think that it is better than that. The Council then decided that one of the ways to revive it was to appoint an experienced, high-powered man in the advertising world, and particularly a man with experience of building industry advertising. It is not surprising that such a man was not prepared to come on terms any less than those which we offered him.

It is also almost certain that in taking over a completely lame duck he suffered considerable losses. He has made a success of the advertising, and we have derived benefit from that and have certain obligations to him. The matter is under review, or about to be reviewed, by the Council at the present time. As a last word, we have to look at this in relation not to the remuneration received in the professional field of life but to the remuneration received in the advertising field, which we know is more attractive than what we receive in our field.

Mr. Ambrose: I have one or two points arising out of the very lucid explanation which has just been given. First, there was no attempt in my question to criticise Mr. O'Shaughnessy, who is obviously doing a very good job for everybody; but I feel that £15,000 today is a very large sum for us to pay in commission. It means that we own a property which is worth more—and I say this advisedly—than this building. There are many publishers who would regard the JOURNAL as a very valuable property indeed. When Mr. O'Shaughnessy took over in 1933 it was a very bad year; we had just had a depression, and he certainly earned his money. I think he has earned his money very well for 25 years. But we are not in a very good position today. I do not like to use the word 'bankrupt', because we are not that; but we are 'in the red', and I think that at this time, having regard to the value of our JOURNAL to advertisers—it being second to none in pulling power—there should be some committee which would go into this matter very carefully. I should like to make a formal proposal on those lines, which I hope someone will second; but I would emphasise that no personal attack is intended on anybody.

The President: It is unnecessary to have a formal proposal, because such a committee is already in being and is discussing this matter and has in mind the very question about which you have spoken. Action has already been taken.

Mr. A. N. Harris [*F*]: On the question of the figure shown for public relations, I realise that none of our income is tax free, because tax relief has been given at the source; but it is well known that in industry and commerce any money spent on public relations is subject to tax relief. Could we have a separate fund for public relations, by means of a national levy, so as to get tax relief on it?

The Hon. Treasurer: The Royal Institute does not pay tax.

Mr. Harris: No, because tax relief is given on subscriptions, but if a separate fund were raised for public relations, what would the position be? Presumably tax relief would be given on it.

The Hon. Treasurer: Presumably you refer to individual members?

Mr. Harris: Yes.

The Hon. Treasurer: A note has been made of that and it will be examined by my Committee to see what the practicability of it is.

Mr. D. H. McMorran, A.R.A. [*F*]: Looking at the rough estimates on page 3 of the Financial Statement, I see that we make a profit of roughly £15,000 on the examinations. Does the Hon. Treasurer think that it is very moral for this balance to go into our pocket?

The Hon. Treasurer: The difference between the income from examination fees and the expenditure on examinations as shown in the accounts does not, owing to the peculiarities of accountancy, give a correct picture, because no charge is made against examination fees for the administrative costs of running the examinations throughout the year, nor for costs relating to the Board of Architectural Education, and the Board do a great deal of work in connection with the examinations. There is therefore a considerable contra, but it is virtually impossible to give it. We have examined the practicability of sectionalising the overall overheads and administrative costs of the Royal Institute, and it has been found up to now that that is impossible. There must be a general overall pooling of administration, both Royal Institute and Board of Architectural Education. It would be necessary to cost the work connected with examinations. It was as an approximate estimate costed out in the expenditure of subscriptions which we published last year, and that indicates that the profit from examination fees is not so great as it appears to be at first sight, but it is correct that there is still a balance.

This has been a matter of very considerable study and discussion by the Committee and by the Council. It has been a long-standing tradition, from the very start of the introduction of examinations in the profession controlled by the Royal Institute, that there should be an element of income derived from that source. Looked at broadly, that seems to be right and fair; it is not the hardship which at first sight it may seem to be. Anybody who wishes to enter this profession, whether he is financed by himself or by his parents or from some other source, has a full knowledge of what it will cost to become a qualified member of this Royal Institute, and if he does not like the idea of paying that cost he need not become an architect. [*Cries of 'Oh!'*] It is in the nature of a premium on membership of this Royal Institute.

In spite of those facts, the Council have decided, in considering this review, that this point of the difference between income and expenditure on examination and entrance fees should be subject to constant annual review.

Mr. Thomas Sibthorp [*F*]: I am not very happy about the name 'Development Fund' for what is virtually a capital reserve; I think it is the wrong term for it and that it should be simply called a reserve fund. After all, we have spent the money on this building, and I do not think that we expect, in our present low financial state, to do anything more to it at the moment. It would be wrong to do so; it is much more important that the available money should be used as fully as possible in the interests of the members, and not on building. I should like this fund, therefore, to be regarded as a reserve fund.

I should like to see any question of paying off any of the cost of the new building put before the membership as a whole and not left to the decision of the Council. It is not always an advantage to pay off a debt too soon. That is my first point.

My second point concerns para. 11, where we are told that the estimates for four years are based 'on a rebate of one-quarter in the United Kingdom and one-third overseas on rates of subscription current in each year' to the Allied Societies. Is that one-quarter on all the members in this country and one-third on all the members overseas? If so, how is that distributed to the benefit of all the members?

The Hon. Treasurer: There is no intention that 'development' in this sense should be applied to the development of the building. We have perhaps become used to thinking of that, but it is intended to imply development of the activities of the Royal Institute for the benefit of the members, with the opportunity to use it to reduce the loan on the building if the Council see fit. We had to find a collective name for this activity, and we selected the word 'development'. I am sorry you do not like it. Whether we change the name or not, we have taken note of your comment and will consider it. We feel that it would be better to indicate that this fund is for progressive development rather than use the word 'reserve', which sounds like something very static, put away in the bottom drawer.

The question of the loan has been the subject of a decision by the Council, and the first call on any balance of income over expenditure will not now be necessarily for the loan but for this fund. It is entirely within the discretion of the Council at any time to decide what shall be done with any balances of income over expenditure.

Rebates to Allied Societies are paid on the basis of *bona fide* members of the Allied Societies only, whether at home or overseas. If an architect practises in Northamptonshire and is not a member of the local Allied Society there is no compulsion for him to join, and no rebate on his subscrip-

tion is given to the Allied Society concerned.

Mr. Anthony Cox [*F*]: As one who was associated with the somewhat censorious motion at the last Annual General Meeting I should like to say how much I welcome the recommendations for a change in financial policy made in para. 6 of this report and how glad I am that the Council have adopted them. I am also glad that our Hon. Treasurer recognises that there are other forms of development besides real estate!

The President: Thank you very much.

Mr. W. Home [*A*]: In the rough estimates on page 3 of the report, under Publications we have a figure of £8,500 for 1959, £4,000 for 1960 and £9,500 for 1961. I assume that this is a direct reflection of the publishing of the Kalendar every second year.

The Hon. Treasurer: That is correct.

Mr. Home: I propose, therefore, that it be published every third year. (*Applause.*)

The President: We shall take note of that suggestion for economy.

With your permission, we will now pass on to the real 'meat' of the meeting.

INTERIM PROVISIONAL REPORT OF THE CONSTITUTIONAL COMMITTEE

Mr. A. W. Cleeve Barr [*A*] (Chairman of the Constitutional Committee): I come before you with some humility, because there is a great difference between standing there in the rostrum and criticising, as I did at the A.G.M., and standing here as Chairman of this Constitutional Committee, which is trying to do something about the situation. At the Annual General Meeting questions of confidence in the Council were raised not only on financial grounds but on the whole question of representation. I think that the Council has dealt very seriously with the criticisms, and the Committee which was appointed is a good one and representative of all sections of the membership in all parts of the country. It has tried to consider from first principles how to make the Council of the Institute more representative of the whole membership.

The terms of reference which we were given have been published. They were first of all to consider the constitution of the Council; secondly, to consider the constitution and relationship to the R.I.B.A. of the Allied Societies, and their finances; and thirdly, to consider the Bye-laws. The problems involved are immensely complex, because the R.I.B.A. is not just Portland Place, but the Allied Societies up and down the country.

If the report which we are presenting smacks of compromise, it is because we have tried to avoid sharpening the antagonisms which exist between the provinces and London. It would have been easy at an interim stage to produce a majority report and a minority report, splitting our Committee in two and reflecting two opposed points of view. We have tried to reach a point of view which will be generally acceptable. If you disagree with that and have some clear-cut alternative proposals to put forward which are worth considering, I hope that you will say so. We shall be very grateful, and whoever puts them forward will be made the Chairman of the next Constitutional Committee!

As I see it, the three main proposals which these recommendations embody are:

1. *The elimination of nominees and the election by postal ballot of all those who are to serve on the Council.*
2. *The elimination of differentiation by classes in representation on the Council.*
3. *The enfranchisement of overseas members, who constitute 20 per cent of the total, and the intention to create some form of Consultative Federal Council for Commonwealth and overseas members.*

With those introductory remarks, I propose to go through the report section by section. There are 21 recommendations, which are summarised on pages 3 and 4 of the document before you. I have divided them into a series of groups and propose to deal with them in that way, so that we can discuss each group in turn. First, however, I should like to say a word about time. As I see it, the consultations and discussions which will have to take place before anything is finalised mean that this work will go on for a long time. The Council were under an obligation to report back to the membership before the end of December, and this interim report had to go to press in October. We have held further meetings since then. The Allied Societies have been asked to give their views by mid-January, and several have asked for a longer time.

We have in mind that after the meeting this evening, and after receiving the views of local meetings of the Allied Societies, the Committee will prepare a further interim report, giving its final views on some aspects of the matter. We hope to get this to the Council by March. If at the Council meeting this is approved—and it may well take more than one Council meeting to consider it—there will then have to be the procedure of holding Special General Meetings and so on, and I think it will be 18 months from now before effect can be given to any of the proposals. So far as elections are concerned, this will at the earliest affect the 1961 elections.

Recommendations (1) to (3)

I shall now deal with the first group of recommendations, Nos. (1), (2) and (3). At present the Council consists of 33 members elected directly by postal ballot and 39 nominated by the Allied Societies and other bodies or *ex officio* members. The representatives of the Allied Societies, under the Bye-laws, are their Presidents. We have taken the view, following the strong expression of opinion at the Annual General Meeting, that the whole of the Council, so far as possible, should be elected by postal ballot.

The question arose as to whether this should be done by one national list or geographically by regions or by some combination of the two. Consideration was also given to the question of proportional representation in various forms. After considering memoranda from a number of individual members of the Committee, we realised that one of the biggest factors to be taken into account was the existence, and the history and traditions, of the Allied Societies. Several Allied Societies favour a single list of candidates, chosen geographically, based on their areas, and nominated and elected by themselves, with possibly the formation of a new society for London. It is obvious that this is a possible solution, but in our view it would have the disadvantage that the Council would be sectionalised according to regions and might be dominated by parochial views. Moreover, the best men are not necessarily distributed on a geographical basis throughout the country. The present basis is part national and part regional, and we think that that should be continued, but that the regional section as well as the national one should consist of representatives all of whom will be elected by postal ballot. For tidiness there might be a London region, but this does not necessarily imply a London society. That question, however, we have pigeon-holed for the moment.

We have also pigeon-holed for the moment the question of Scotland and Ireland, other than making the suggestion to representatives from Scotland that they should at least fall into line so far as direct postal ballot elections are concerned.

We consider that the regional representatives should not act only as mandated delegates, simply coming to express the point of view of a particular group, but should come as individuals, although, of course, the benefit of their being chosen by a region is that they know the local conditions. Equally, they will be able to report back to their region the views and discussions of the Council. We want to make it quite clear that they will not be just mandated delegates. At the moment, from my short experience on the Council, I believe that some Presidents of Allied Societies, because they have not been mandated to do so, feel that they should not speak on particular questions. We feel strongly that all those who are elected, whether regionally or nationally, should come as individuals.

I have one further point to make on these three recommendations. Since the publication of this document we have held further meetings and have begun to look at the financial implications of our proposals. It may be that we shall need to qualify the statement in (1) that 'In the United Kingdom membership of the appropriate provincial Allied Society to be automatic on corporate membership of the R.I.B.A.' There are ten Allied Societies with local subscriptions in addition to the rebates which they get from the R.I.B.A., and they amount in total to about £4,000 a year. The recommendation implies that the R.I.B.A. as a whole would take that on.

If all members of the R.I.B.A. are made automatically members of the appropriate Allied Societies, postage and other local expenditure of the Allied Societies will go up. This question, therefore, will have to be further examined, and it may be necessary for the purposes of regional voting for all members to be allocated to electoral rolls based on the Allied Society areas, but with the local societies allowed to continue with separate subscriptions, as at the moment. It would be most valuable to hear points of view expressed on this issue.

Mr. R. Duncan Scott [*F*]: This interim report begins with the statement that the main reason for the Committee's work was to carry out the principle that the R.I.B.A. Council should be 'fully and democratically representative of the profession at large'. We shall all agree with that, but probably very few would agree on what 'democratically' really means.

It is stated in the report that the Council is composed of three main groups: the nationally elected members, representing 46 per cent, the Allied Society representatives, 33⅓ per cent, and representatives of other bodies, including the Allied Societies overseas, about 21 per cent. An analysis of the first group, those elected nationally, shows that over the last few years they have usually been architects who have been in the headlines of the architectural press—you are one of them, Mr. President!—or who are at the head of a large architectural staff of a county or other authority. They are usually excellent architects and very nice people, but generally unknown to the electorate at large so far as their potentialities for running the affairs of the Institute are concerned. In this respect they may be good or bad; it is a complete gamble. They have no contact with the members who vote for them, and *vice versa*. They merely represent and are responsible to themselves.

The Allied Societies' representatives, on the other hand, are responsible to the councils of their own societies, who are or should be responsible to their members through smaller groups such as chapters. Mr. Cleeve Barr says that the Allied Societies' representatives represent the Allied Societies regionally. I can assure him, I having been a representative of an Allied Society, that that is not the case. We represent architects at large, and we happen to be in contact with them at first hand.

In para. 2 of the Committee's report they acknowledge the importance of this means of communication, but recommendation (3) may mean that regional members elected to the R.I.B.A. Council are not on the Council of the Allied Society in their area, thus severing what little means of communication exists. I believe that a democratically-elected Council means a Council which is in two-way communication with the individual members of the Institute. We feel that the Council should be elected entirely on a regional basis, so that that two-way communication can exist.

Mr. A. N. Harris: I support the last speaker in some measure. I think that the 'parish pump' reference in the introduction to this report is unfortunate, to say the least of it. If we are to use metaphors, we might say that a national system of election is a method of preserving dead wood. I plead with the Committee to review their proposals and to pursue some form of regional election. I believe that under a system of regional election the eminent national figure would still have his place on his merits, but I would say at the same time that professional eminence has not always marched hand in hand with dedicated service

The President: We shall take note of that.

Mr. R. A. Cooksey [*F*]: I speak as a mandated delegate of the South Eastern Society, and on its behalf I wish to say that all the Chapters and the Council of the South Eastern S.A. have considered this interim report, and that they reaffirm the purport of the original motion which was tabled by Mr. Duncan Scott at the Council meeting in April 1958, but they wish to revise the wording slightly. As now reaffirmed, the resolution, which is being conveyed in writing to the Secretary of the Institute, reads:

> 'The Council of the South Eastern Society is of the opinion that the R.I.B.A. Council should be so constituted that all categories of its members should be elected by the Allied Societies, including a London Society, thus being directly answerable to their electorate.'

We now say that the members of the R.I.B.A. Council should be largely elected by the Allied Societies, whereas formerly it was implied that they should be wholly elected in this way.

To show my independence, I should like to speak personally and put forward the suggestion for consideration by the Committee that perhaps the Architectural Association might form the basis for the formation of a London society.

Mr. G. A. Atkinson [*A*]: I wish to put forward a counter view on this issue of regional representation, and I do so as a provincial member. If regional representation were to be the only method of election it would prove as fallacious as the idea that all representation should be nationally chosen. A valuable aspect of the present system is that there are two types of approach. An architect who lives in the provinces and spends the whole of his life there and knows the local people can best find representation through the people whom he knows in his area, and at the same time he has the right to vote for national figures if he wishes to do so. Another architect who is not linked in that way to one place may not have the same local ties. Many architects travel from time to time and get to know people in different parts of the country, and will sometimes wish to vote for them rather than for local candidates whom they may not like. Too much regionalism would be as big a danger as too much nationalism.

Mr. Thomas Sibthorp: I have some very strong views on the representation of the London area on the Council of the R.I.B.A. and on Allied Societies. They are these. I believe that it is a very good thing to have people in the provinces represented through their Allied Society on the Council of the R.I.B.A., as we have at present, but I think that the method of electing them may be a different matter altogether, and it is not necessarily the President of the Allied Society who should be their representative. He may not be able to devote the necessary amount of time to it. A more democratic form of election by the Allied Societies is therefore desirable, but I still think that election both nationally and at the Allied Society level is the right way to select members of the R.I.B.A. Council.

I have for a long time wanted to make a plea to the R.I.B.A. to consider London and Middlesex, as is now suggested, in connection with this question of Allied Societies. London is a huge area. Most young architects who come to London to work or who study in London know very few people at Portland Place. In the provinces they have the opportunity to meet and mix socially and educationally with their older brethren and those with whom they will work later, but if we consider London as a whole in terms of one society we are taking far too large an area.

I happen to belong to the Royal Institution of Chartered Surveyors, which has five Branches covering London. That, to my mind, is about the number which we need if the arrangement is to be successful. I ask the Committee to think seriously about having some form of Allied Society for London, some form of London representation, at this lower level, not by one body but by several.

Mr. C. P. Howells [*A*]: I wish to take up one point in Mr. Cleeve Barr's preliminary remarks, with regard to the mandate of representatives from Allied Societies. I feel that this point is basic to the objections raised at the Annual General Meeting, where the uproar stemmed from the objection of some architects to the fact that there was very little contact between them and any of the representatives on the Council, whether or not those representatives came from the Allied Societies. I agree with Mr. Barr that the combination of the two methods of election would be admirable, 50 per cent from the Allied Societies and 50 per cent elected on a national basis, but I feel that the Allied Societies should at the same time be encouraged to use their representatives in the manner in which representatives are normally used, by getting them to report to the members what has happened on the Council and to give them a pre-view of matters which are being discussed by the Council and finding out their opinions.

Mr. Stephen George [*A*]: I believe that the life of the Allied Societies is often deprived of a great deal of vigour because the younger members have to pay more than one subscription in order to take a full part in the life of the Royal Institute and of their Allied Society. I know that certain

provincial societies have felt the strain very badly when they have been forced by other bodies to adopt a subscription.

I consider it to be essential, in order to achieve the aim of full democratic elections within the Institute, that automatic membership of an Allied Society should be in force.

Mr. A. G. Ling [*F*]: I was interested in Mr. Sibthorp's remarks about the smaller associations which he thinks ought to be arranged for London. I feel that there are not merely two levels of activity amongst architects in this country but three, and they are all important. There is the national level, dealing with national policy, and there is the regional level, dealing with parts of the country which divide themselves up fairly readily and have to have a policy towards architectural matters in their areas. There is also, however, the smaller area, the town or urban area, where it is very important that there should be a keen and vigorous group of architects working for the cause of architecture.

Here I refer to the branches or chapters of the Allied Societies, which often form the real points of activity for architects, many of whom would have to travel a long distance to attend a meeting of the Allied Society but who find it easy to attend a local meeting. I am a member of the Committee and have pointed this out to them. I feel that so far they have not, perhaps, given enough consideration to the importance of these local groups, these small chapters and branches. Just as there is sometimes a feeling in the provinces that the R.I.B.A. is too much a London affair, so it is often felt in the smaller towns that the R.I.B.A. is too much on an Allied Society basis and that not enough attention is given to the chapters and branches.

These three levels are most important, and any election system should be aimed not at setting one level at loggerheads with another but at bringing them all together, each level helping the others. The Allied Societies should be looking out for towns where they could form a local chapter or branch, where some important architectural issue or issues have arisen. These chapters or branches need not be permanently in existence; they may exist for a time and then die away, according to the importance of the issues involved; but it is important that the Allied Societies should recognise that these smaller bodies can play a very important part in the affairs of the Institute. The Allied Societies have their responsibilities to these small bodies, just as the R.I.B.A. has to the Allied Societies. I hope that we shall not put one system of election against the other, but find a system which will satisfy all these levels.

Mr. R. O. Foster [*F*]: I am the President of an Allied Society, but I want to speak as an individual member of the Constitutional Committee and say that I feel that this dual voting system is the right one. I think that every individual member of the R.I.B.A. should have the ability to vote for someone outside his region if he feels that the candidate is the right man to serve on the R.I.B.A. Council. That, however, does not do away with the need to have much better regional and local representation than we have had in the past.

The question of communication which Mr. Duncan Scott raised has been discussed at length in the Constitutional Committee. Communication backwards from the R.I.B.A. Council to the Allied Society is just as important, in our view, as the other way round. Obviously some means must be found to bring that about and make it completely effective. There is no intention in the recommendations of the Constitutional Committee, as I understand them, to do anything but encourage that two-way communication.

So far as the question of 'delegates' is concerned, I think that there is perhaps a parallel with Members of Parliament. If we have members from the regions elected for three years, they will be representatives but their constituents can throw them out at the end of three years, just as an M.P. can be thrown out. A Member of Parliament can go back and ask his constituents for their opinions, but he does not feel, any more than a member of the R.I.B.A. Council should feel, that he cannot use his initiative and intelligence but must 'ask dad' about everything. If we took that view we should end up with card votes and all sorts of other unpleasant things which would not work in a national institution of this sort.

Mr. L. A. Howles [*A*]: I speak as a corporate member of the Institute who is not a member of a local society. There seems to be a general assumption in this meeting that this regional representation will automatically cover all the members of the R.I.B.A. That is not so. I would ask that members be automatically included in local society voting lists at least, because they are penalised at the moment by having to pay an additional subscription for very much reduced benefits.

Mr. Cleeve Barr: If members feel strongly that throughout the country all members of the R.I.B.A. should automatically become members of their Allied Society they should say so, because the Council would very much welcome an expression of opinion on that. The main problem which caused us to have second thoughts was entirely financial. If you think that it is the right solution, we have by no means made up our minds finally on the question, and the finance might have to be found. I hear mutterings from the Hon. Treasurer about that!

On the question of regional groupings, one of the problems we met with was that if we have regions sending representatives, what is to be done about those Allied Societies which have less than 50 per cent of the members of the R.I.B.A. in their area in their own membership? I take it that those of you who have been talking about a regional basis of voting do so accepting the automatic membership of Allied Societies and are not speaking of regional representatives separate from the Allied Societies.

Mr. E. Wilford [*A*]: I speak as the Hon. Secretary of a very small Allied Society. If there is automatic membership, presumably the subscription will have to be waived. Of the ten Allied Societies in the list which have a separate subscription, there are nine with about 300 members or under. We have only half that number. We have members of the R.I.B.A. in our area who are not members of our society, but they will not make up financially for the loss of the guinea subscription which our members willingly pay, and if we abolish this extra subscription we shall have drastically to curtail our activities, which I think would be a very bad thing. We have good lectures and travelling studentships for local students, and if we had to curtail our activities our members would lose interest. A society of 1,000 members, with several chapters and branches, obtains a large sum of money from the R.I.B.A. by rebate, but we do not, particularly now that the rebate has gone down from one-third to one-quarter, though I appreciate the fact that the raising of subscriptions from 1 January will increase the amount which we get.

Mr. M. G. Gilling [*F*]: There are two points in Mr. Cleeve Barr's opening remarks which I should like to mention. The first is his suggestion that there is antagonism between the Allied Societies and the R.I.B.A. I do not think that that is true. I speak for the Liverpool Society, which is one of the oldest and has never, to my knowledge, been antagonistic to the R.I.B.A. We are, perhaps, not always in agreement with the Institute! He also spoke of allowing the Allied Societies to continue. That is a very dangerous phrase, because, after all, we are autonomous.

Mr. Cleeve Barr: If I spoke of not allowing the Allied Societies to continue, I did not mean to say that. So far as 'antagonistic' is concerned, the Allied Societies and the London members may not really be antagonistic, but when they get together there is always a large measure of disagreement.

Recommendation (4)

Mr. Cleeve Barr: I should like to take (4) in two parts, the first being that there should be no differentiation by classes of membership. This does not mean that there should be only one class of membership of the Royal Institute; it simply means that so far as voting for the election of the Council is concerned there should be no discrimination by classes. Members would, we think, continue to become Fellows for the value which it bestows on them in their practices, but the question is, do the Fellows as a class deserve, on account of their wisdom and experience, a disproportionate number of seats, relative to their numbers, on the Council? We feel that if Fellows, because of their merit and experience, are the best qualified to serve, then in an open election they will be elected, and there is no need for the rather artificial distinction which we have at the moment.

Mr. C. P. Howells: I realise that we cannot take a vote on these recommendations, but

I feel that the opinion of the majority of members present would be better expressed by a show of hands on these small points rather than by expecting members, who may not be used to speaking in public, to get up one after another and say that they agree or disagree. (*Applause.*)

Mr. M. G. Gilling: A show of hands will not be truly representative of the opinion in the country at large.

A Member: But it will represent the opinion of this meeting.

The President: We will have a show of hands from now on. It will make no real difference, because all that is said will be noted.

On a show of hands for and against (1), (2) *and* (3), *an overwhelming majority was in favour of the recommendations.*

Mr. Thomas Sibthorp: Does that include the automatic membership of Allied Societies?

Mr. Kenneth Campbell [*A*]: This illustrates the difficulty with a show of hands. On three items, members may agree with 80 per cent and disagree with 20 per cent, but it will not be the same 80 per cent and 20 per cent in each case, and all you are getting is the general feeling of the meeting.

The President: The object of the meeting is to get the general feeling of this very small section of the architectural profession—because there are 18,000 of you. The suggestions put forward so far have been extremely helpful. We will now have a show of hands on the first part of (4), that there should be no differentiation by classes of membership.

On a show of hands, this part of the recommendation appeared to be accepted without dissent.

Mr. Cleeve Barr: The second part of (4) is that there should be no differentiation so far as election to the Council is concerned by categories of employment or occupation. The Committee, in discussing this, had considerable sympathy with the point of view that salaried assistants in public or private offices should have a special group of seats on the Council, but, after discussing the matter for some time, we turned that down, for several reasons. First, it is always difficult to ensure that the assistants who are elected are really representative of a group of that kind. Secondly, if the whole character of the Council is made more democratic assistants should be able to secure election anyway. I am told that on some Allied Society Councils there has in the last year or so been a majority of salaried assistants. The main objection, however, was that as soon as we allow sectional representation of any kind it is very difficult to refuse it to all the other sections that want special representation. There are at the moment two applications before the Committee for special groups of architects to have a seat on the Council. One can imagine such a demand from private architects, from city and county architects, from architects in Government service or working with contractors, or from deputies and other categories. We therefore decided against this as a principle.

Mr. L. O. Woodward: If we do not have a proportion of employed architects on the Council, there is almost bound to be a tendency for the better-known architects to be members of the Council. They are gentlemen who are on the Council to support and build up the reputation of the Institute and of architects as a whole, but they are also keen business men, and as business men they will pay no more than they have to for their assistants.

The show of hands indicated a very large majority in favour of the recommendation.

Recommendations (5) to (7)

Mr. Cleeve Barr: I have grouped together (5), (6) and (7). (5) is: '*All members of Council should serve for three years and should be elected by postal ballot.*'

At the moment roughly half the Council consists of Allied Society Presidents, some of whom are elected for twelve months and some for two years. I think they will agree that it takes them a year on the Council to get used to its ways, and that a three-year term would be much more effective. The implication of this is that it would be very likely that in the Allied Society regions the representatives would not necessarily be the Presidents. There is a great deal to be said on both sides, and much depends on the local circumstances, but there will be no need for the representative to be the President.

(6) is that the Council should be no larger than it is now. It now has 72 members, and we are unanimous in feeling that that is a little too large and that slightly fewer would mean a more convenient executive.

Then there is (7): '*The present provision by which a member of Council may not serve continuously for more than six years should be retained, subject to the provision set out at paragraph* 3(*b*).'

We thought that that was good democratic practice. The provision in para. 3(*b*) is that after six years a member of Council who was due to retire could be appointed an honorary officer, which means Hon. Secretary, Hon. Treasurer or a Vice-President. There are obvious cases of outstanding people, and I think there were three at least who have had to retire from the Council under that rule in the last year who had outstanding qualities and who might well have been considered for posts as honorary officers.

Mr. Brian Bunch [*A*]: I think that (5) is a valuable suggestion for improving the representation of the provincial members, by extending the period to three years. I support very strongly the suggestion that the election of provincial representatives must be by postal ballot. I believe I am right in saying that in some places it can be by nomination at present.

Mr. Bryan Westwood [*F*]: I think that three years is unnecessarily long. Two years would be sufficient and would mean that more people would have an opportunity to serve on the Council. Six years is all right as a total, but I should prefer the period to be two years, with a larger number of names at the election each year.

Mr. G. P. Bell [*A*]: Is it the intention to hold general Council elections every third year, or would one-third of the Council retire each year? A second point is that three years may be too long a period for some people to serve, because circumstances change. Could there be arrangements for by-elections if someone has to resign?

The President: The answer to your first question is that one-third will retire each year. Your second remark is a suggestion and will be noted.

Mr. R. M. Button [*Student*]: Can some explanation be given about the work of the Council? It seems to me that the numbers involved must make it a very cumbersome body. Do the Council meet and take decisions or do they appoint some inner cabinet?

The President: There is an Executive Committee which is much smaller than the Council, but quite often the full Council exercises the executive power and expresses strong opinions on various matters. To hear it sometimes one would not say that it was an inefficient and unwieldy body; it is sometimes almost jet-propelled. You say that it is cumbersome, and that is agreed. The Committee is looking into this to try to reduce the number. There is an Executive which sifts the matters which are brought before the Council.

Mr. Button: The purpose of my question was to suggest that the Council as elected should then form a college of electors and elect an inner body.

The President: That will be recorded.

Mr. D. H. McMorran: May I remind the last speaker that there is no constitutional provision, so far as I know, in the Charter or Bye-laws for the existence of this so-called Executive Committee?

Mr. L. R. Stedman [*A*]: Under (6), if the total number of members of the Council is to be 72, have the Committee considered what the ratio should be of national to regional members? That does not seem to be stated anywhere. Is it proposed not to change the present proportions?

Mr. Cleeve Barr: The Committee have discussed this a good deal but have not come to any decision on it. There are many questions involved on each side. The logic of the way in which we are thinking at the moment is that it should be 50/50. With a Council of, say, 60 members, and with at least 24 Allied Societies, one representative each would almost give 50/50. We are not thinking in terms of a great unbalance one way or the other.

Mr. George Whitby [*F*]: I would point out the danger of a three-year term if the Council is to be elected on a 50/50 basis. It will mean that the Allied Societies will only elect a representative every three years.

Mr. B. H. Cox [*L*]: From what I have seen, the Allied Society representatives would be able to become much more effective if they served for three years.

Mr. J. Radford [*A*]: Is it possible to suggest how in the revised Council an Executive—and there is probably great need for one—is going to be elected? Has it been considered?

Mr. Cleeve Barr: No, because we have not yet had time to get to the question of the Bye-laws, under which will come the Committee structure.

Mr. K. Nealon [*F*]: Will each Allied Society be represented by one member, as at present, or will there be some alteration? We see that the South Eastern S.A., with 1,249 members, has one representative, and another Allied Society with just over 100 members also has one representative. That does not seem to be a fair division.

Mr. Cleeve Barr: That has not been finally discussed by the Committee, but my personal interpretation of the implication of what we are considering is that each Allied Society should have one representative, regardless of size. The other members of the Committee may take a different view.

Mr. T. R. Spaven [*A*]: When Mr. Barr refers to Allied Societies, does he count the R.I.A.S. as the one Allied Society in Scotland?

The President: Scotland is going to be treated separately and has been pigeonholed for the time being.

Miss Stella M. Scott [*A*]: If an architect is elected as a member of the R.I.B.A. Council for a region, and leaves that region early in his period of office, will he continue to be a member? Some people move from one end of the country to the other, and it might leave an Allied Society with no representative.

Mr. Cleeve Barr: We have not considered that. We must think about it.

The President: We will take a show of hands to find out those who are generally in favour of (5), (6) and (7).

The show of hands indicated that there was little if any opposition to these recommendations.

Recommendations (8) to (12)

Mr. Cleeve Barr: I have grouped (8), (9), (10), (11) and (12). (8) is: '*The Chairman of the Allied Societies' Conference to be ex-officio a Vice-President, R.I.B.A., as at present.*'

That is without prejudice to possible changes in the future of the Allied Societies, which we have to consider as a subject in itself.

(9) is: '*The two Vice-Presidents already members of Council to continue to be appointed by the Council as at present.*'

The other three recommendations read:

'(10) *The Council to retain the power to appoint a fourth Vice-President in special circumstances from outside the elected membership of the Council as at present.*'

'(11) *The Honorary Secretary and the Honorary Treasurer to be appointed by the Council from amongst elected members of Council or those who, having just completed a six-year term of office, would otherwise be debarred from service in the current year.*'

'(12) *In future, there should be no restriction as to the class of membership of Honorary Officers other than the President.*' The significant point there is the abolition of the present Bye-law which provides that the honorary officers shall be appointed only from the class of Fellows, and the appointment of the Hon. Secretary and Hon. Treasurer from elected members of the Council.

Mr. George Whitby: Can Mr. Barr explain why the Committee consider that Associates would not make good Presidents?

Mr. Cleeve Barr: We shall be glad to consider your point of view on the matter.

Mr. G. T. West [*A*]: I think that that last remark throws an interesting light on the present situation, which is that very largely the authority and the attraction of the class of Fellow has gone. There must be many Associates who have no ambition to be Fellows. The Council might well consider what should be done in the circumstances to reinstate the Fellowship as a class to which all members would wish to attain.

The President: You can rest assured that we shall consider it.

Mr. C. P. Howells: Is it now possible for the Hon. Secretary and the Hon. Treasurer not to be elected members of the Council?

The President: It is.

Mr. Howells: Might it be difficult to obtain a person with suitable qualifications? Has it been difficult in the past to inveigle suitable people into these offices?

The President: The problem has been that when someone has been going off the Council he could not be given one of these offices, although he may have had experience and be suitable.

Mr. Cleeve Barr: In our discussions, that was one of the main points considered, whether or not, out of a Council of 72, one could be sure of finding people with the requisite qualities, more particularly for the post of Hon. Treasurer. The Committee took the view that, even if it had been difficult on occasions, with the proposed revision of the Council, by which members were elected for three years, that difficulty should be removed. One of the difficulties at present is that over half the members of the Council have been elected for only one or two years.

The Hon. Treasurer: Once one has been a Treasurer, it would take a deuce of a lot of inveigling to become one again!

Mr. D. Beecher [*F*]: On the question of shortage of Fellows, I understand that one of the difficulties has been that in the past the Fellowship has not necessarily meant the passing of the final examination. That situation is now gradually disappearing, so that that objection to becoming a Fellow will also disappear. The other objection seems to be the additional subscription. I suggest that anyone who does not want to pay that subscription does not want to be President.

The President: We will take a show of hands on (8) to (11).

These recommendations appeared to have unanimous approval.

The President: We will take a show of hands on (12).

This recommendation was approved by a considerable majority.

Recommendations (13) and (14)

Mr. Cleeve Barr: Perhaps (13) and (14) should be considered together, because they concern the two outside bodies now represented not as integral parts of the R.I.B.A., as the Allied Societies are, but as bodies having members other than members of the R.I.B.A. They can be discussed together, but the votes should be taken separately. In pursuance of the policy that only elected members should be on the Council, the Committee at first ruled out *all* other bodies, but at a second meeting they reconsidered the case of the A.A., because of its very long association with the R.I.B.A.—for over a hundred years—and the fact that it was responsible for the beginning of the examination system and shared the same building with the Institute for many years and so on. I think it is true to say that it is largely on sentimental grounds that the Committee recommend, in (13), that the A.A. representation be continued.

So far as the A.B.T. is concerned, it has been represented on the Council since about 1919. It was formed as an offshoot of and with the help of the R.I.B.A. to represent assistants, but it is a body representing sectional interests. It is obvious that both the A.A. and the A.B.T. have important contributions to make in their own fields, but so far as the R.I.B.A. and the A.B.T. getting together on important issues which they have in common is concerned, it is felt that this could best be done by collaboration on joint committees, ad hoc or permanent liaison committees, and that to give the A.B.T. a vote would be, in effect, to give R.I.B.A. members in the A.B.T. a third vote compared with the others. In (14) we recommend that the representation of the A.B.T. on the Council be discontinued.

Miss Hermione Martin [*A*]: Tied up with the fact that the A.A. should be represented is the fact that London is not represented if the A.A. is not on the Council. If London has a proportional vote the representation of other regions will go down. A ratio of 50/50 is not fair on London architects. If we do not have a representative of the A.A. on the Council we must have a proper London society, or societies, as Mr. Sibthorp has suggested. Could this be considered by the Council?

Mr. Leo De Syllas [*F*]: I speak as a member of the Council of the A.A.

The Council feels very strongly that the proposal to include an A.A. representative on the R.I.B.A. Council should not be adopted on what the Committee call sentimental grounds, but it regards it as a compliment that the Committee believes that the A.A. has practical contributions to make. It represents 2,000 members, not confined to London; it is a national organisation. Due to the experience which it has acquired in the general architectural field, and particularly in the educational field, the A.A. would say that with over a hundred years of such experience it has a contribution to make to the deliberations of the Council of the Royal Institute. It could only be on practical grounds that it would accept representation, and even so it would not feel that it should put forward any strong view that it must be represented, in so far as it accepts (again in terms of a comment, which is the only stage reached in this discussion) the general democratisation of the Council of the R.I.B.A. It is on those practical grounds that the A.A. would wish to be represented, while realising that it has a long historical association with this Institute.

Mr. Kenneth Campbell: I speak as a member of the A.B.T. We should not have strong objections, nor could we bring forward any, to a thorough democratisation of the R.I.B.A., which we should look on with favour. I cannot, therefore, on those grounds bring forward any objections to (14). What we feel is that it is most invidious and illogical to make an exception of one outside body and not of the other. It is not an easy operation on which the Constitutional Committee has embarked, and reasons of sentiment are entirely irrelevant to the task which the R.I.B.A. now has in hand. If, however, the Constitutional Committee and the Council wish to compromise the logical basis on which they have so far attempted to approach this problem, I think that a case can be made for keeping the A.B.T. in.

I am also a member of the A.A., but I believe that a far stronger practical case for keeping the A.B.T. in can be made. There is to begin with the basis on which it first came in, that its membership represents to a very large extent the lower-grade architectural assistant. In spite of the change in the personnel of the R.I.B.A. Council, the salaried architect who sits on its benches tends to be a very much higher type than the ordinary architectural assistant, if only because it is much easier for him to get every fourth Tuesday afternoon off, and other mornings and afternoons off to enable him to sit on the committees, membership of which is part of a Council member's job. I believe, therefore, that the task of representing the architectural assistant is still an important one.

Further, the A.B.T. is a national body and not a sectional one in the sense of representing one form of architectural assistant. Next—and this relates to the point which Mr. Barr made about contact through joint committees—the Council of the R.I.B.A., quite naturally, in its normal personnel has very little experience of trades union negotiations, and its relations with outside bodies such as the T.U.C. are extremely thin and remote. The A.B.T., however, through its representative on the Council can bring that kind of experience. Still more important is that a professional voice can be raised at the Trades Union Congress. I believe that to be extremely important, and that it will become even more important in the future. The deliberations of that body do affect our lives and our profession to a very large extent, and, unless the architect's voice is heard there, things can and do go by default. It has been our experience over the past fifteen years that on occasion, and even in spite of the resistance of the General Council of the T.U.C., which is no mean body, the architect, speaking in the body of the Congress, has been able to sway the Congress on some matter of planning and building.

For these reasons I think that, if a compromise is to be made and one of these two bodies is to retain its representation on the R.I.B.A. Council, the A.B.T. should also retain its representation. If, however, a purely logical approach to this reorganisation is to be made, and no nominated (even if elected within their own body) representatives are to be members, I believe that the A.B.T., although it would still feel that it had a contribution to make, could not contest the decision.

The Hon. Treasurer: It may be worth remembering that, irrespective of the merits of the case for the A.A. and the A.B.T., it is a fact that if both bodies are represented on the R.I.B.A. Council it means that those members of the R.I.B.A. who are members of both of them will have a total of four votes in elections to the Council, whereas others will have only two.

Mr. B. H. Cox: As a member of the A.A. and of the A.B.T., I am more conscious of paying extra subscriptions than of getting extra representation.

Mr. Thomas Sibthorp: I do not bring any sentiment whatever to bear in what I am going to say. I believe that the A.A. should be represented on the Council of the R.I.B.A., but only for this reason, that it is capable of making a very good practical contribution on the educational side of architecture, whereas the A.B.T. has not such a predominantly architectural flavour as the A.A. The A.B.T. has a very large number of members who are not architects, or even directly associated with the profession of building. I think that there is a very great distinction between the two bodies.

I go further than that. There is a feeling that the A.A. is in a position to represent the London architect, but frankly I believe that that is a complete fallacy. I do not know what the figures are today, but in 1948 or 1949, when I analysed them, only 15 per cent of the London members of the R.I.B.A. were also members of the A.A. It cannot be suggested that the A.A. represents the London members. Secondly, I do not think that we can have London represented by one body in the centre of London.

Mr. Harry Moncrieff [*F*]: Mr. Jefferiss Mathews mentioned four votes and two votes. Over a period of three years, if there are 30 elected members, I have 30 votes; someone who is a member of the A.B.T. will have 31, and if he belongs to the A.A. as well he will have 32. Surely that is all that it means?

Mr. Cleeve Barr: I think that Mr. Moncrieff's arithmetic is correct.

Mr. Norman Whicheloe [*A*]: The A.A. Council or a group of members of the A.B.T. Council could put forward a nominee, and after his name there could be put 'A.A. nominee' or 'A.B.T. nominee'. If the A.A. command a good following, their candidate will be elected.

Mr. Brian Bunch: I am not a member of the A.A. or the A.B.T. I think that, while acknowledging the wonderful contributions which both bodies make to architecture, probably we should be much safer if we were logical about this matter and gave neither of these bodies a direct representative. Whoever was chosen as a nominated representative of either would probably be on the R.I.B.A. Council in any event for his own value.

Mr. Ronald Hardy [*A*]: This matter can be resolved by the Committee when it comes to discuss, as at some time it must, the method of voting under these complicated arrangements. Proportional representation has been mentioned, and I suggest that full advantage might be taken of a system of proportional representation of a national body which has been mentioned in the Press.

I strongly advise the Committee to take advantage of this outside body's offer to give its views to the Committee.

The President: We shall have to take first a show of hands for no representation, then for the A.A., then for the A.B.T., and then for both.

Mr. J. L. Caldwell [*F*]: I was going to suggest that we should take first the question of the London area and its division into regions.

The President: That does not arise here.

Mr. Caldwell: There is then the question of proportional representation.

The President: That has nothing to do with this. We must keep to the questions before us and try to get clear opinions on them.

Mr. R. S. Watson [*A*]: The A.B.T. evidently base their claim for representation on the fact that they represent the interests of members in salaried employment. It is admitted, nevertheless, that they do not represent architects only. If some society is going to represent architects in salaried employment, should not the Local Government Architects' Society be considered? I think that it is worth consideration.

The President: That will be considered.

Mr. Thurston Williams [*A*]: I am Chairman of the Provisional Executive Committee of the Local Government Architects' Society. We are going to recommend our members not to seek special representation on the R.I.B.A. Council. It is my hope that both the other organisations concerned will do likewise and so resolve this issue. We do not seek special representation, but we hope that the representation of the salaried architects will be increased beyond what it is at present. We believe that that can be done through the normal constitution of the Institute and that our members should seek representation in that way. The members of my Committee believe that there is a case for special salaried member representation, but as salaried members and not as representing a particular organisation.

Mr. Cleeve Barr: The Constitutional Committee have no doubt at all about the contributions which both these organisations can make in their respective spheres, but we feel that there are other means of achieving collaboration with them. Another point is that the Council has reached its present size over the years by accretion from ex-officio members and representatives from other bodies. Mr. Thurston Williams may get his way at the forth coming meeting of the Local Government Architects' Society, but it is interesting to note that another member of that Society feels that it should be represented. My feeling is that we should probably stick to our principles on this issue.

The show of hands revealed a very large majority in favour of no representation for either body.

The President: The feeling of the meeting is clear, and it would be a waste of time to have further shows of hands on this matter.

Mr. Kenneth Campbell: There is this alternative, that if the Committee thinks that one or other body should go on, then should both go on? That is not incompatible with the vote which has just been taken.

The President: We will take note of it.

Recommendations (15) to (17)

Mr. Cleeve Barr: I propose taking (15), (16) and (17) together.

'(15) *The representation of the Salaried and Official Architects Committee by two members on the Council to be discontinued.*'

'(16) *The Chairmen of the R.I.B.A. Registration Committee and the Board of Architectural Education to continue to be ex-officio members of the Council; the former appointment not to be restricted by class of membership, but the latter to remain restricted to the class of Fellows.*

'(17) *No other ex-officio appointments to be made to the Council.*'

There are good reasons, because of the importance of these two Committees to the R.I.B.A., for making an exception to the general principle for the two ex-officio members in (16). But why should the latter be a Fellow? The Chairman of the Board of Architectural Education is, I am told, also Chairman of the Committee which admits Fellows, and it seems reasonable that Fellows should be judged by their peers.

Mr. A. N. Harris [*A*]: Are these two officers more or less permanent, or are they elected every so often?

The Secretary: Usually the Chairman of the Registration Committee holds office for three years, and the Chairman of the Board for two years.

Mr. Harris: Then would not the case be met if those two officers were appointed from members of the Council, so as to save two seats on the Council?

Mr. Cleeve Barr: I should prefer someone with longer experience on the Council than I have to speak about that, but it seems to me a practicable suggestion.

The President: We will consider it.

Mr. George Whitby: The Registration Committee is so important that its membership is never announced to members and it makes no report to members in the Annual Report. I hope that that is not the reason why the Constitutional Committee selected the Chairman of this Committee for ex-officio membership of the Council. I happen to know the membership of this Committee, and I believe that the morality of its actions is most suspect.

The President: Those are extravagant words. If you want the names of the members of the Committee you can have them.

Mr. Whitby: I know them, but it is the only Committee of the R.I.B.A. of which the members are not informed and the only Committee which does not report to the A.G.M.

Mr. G. A. Atkinson: Arising out of the question of salaried and official architects, I agree with the policy laid down that they should not have special representation, but there is one problem which has not been dealt with and which I should like the Committee to consider further, and that is the salaries and negotiations side. It is linked with the question of whether these various bodies should be part of the Council or whether some separate body should be formed to represent salaried and official architects.

The Hon. Secretary (Mr. Richard Sheppard): The whole Committee structure is under revision, and negotiations about terms and conditions of service, salaries and so on will be taken care of by the Professional Relations Committee. The matter is being considered carefully not only in relation to the Council but in relation to other bodies such as the Local Government Architects' Society and the A.B.T.

Mr. Leo De Syllas: Is it part of the constitution that the Chairman of the Board of Architectural Education should also be Chairman of the body which admits Fellows? If that is not so, I do not see why the Chairman of the Board should necessarily be a Fellow. By separating the posts we can eliminate this restriction.

The President: We can put that to the Committee and ask them to consider it.

Mr. A. G. Ling: When you take a show of hands, Sir, will you take (16) separately? I believe that we have found a way of meeting this point logically.

The result of the show of hands was that (15) *and* (17) *were approved without dissent, but there was a large majority against* (16).

Recommendations (18) to (21)

Mr. Cleeve Barr: I propose to take the last four recommendations together. They all deal with the question of overseas members. At the moment overseas members do not have a vote, though they constitute 20 per cent of the membership. We feel that they should be enfranchised, and with the use of air mail and so on there appear to be no administrative difficulties.

The big question here is the representation of Allied Societies overseas. We think that in the long term the best plan is to work towards a Federal Consultative Council, and that we should set up a committee to get in touch with the overseas societies and discuss that objective. In the meantime, the five deputies in this country of the Allied Societies overseas should be nominated from elected members of the Council.

Mr. Kenneth Campbell: Is it really right that such a large section, right outside the general orbit and the day-to-day troubles in this country, should have such a large say in voting for the membership of the Council?

The President: That will certainly be considered, but I think that it is probably the duty of this Council to bring the Dominions in more and make this a closer-knit body, because we are all British architects.

Mr. Campbell: Letting them share our purchase tax?

Mr. Cleeve Barr: The 20 per cent includes not only Dominion members but members from this country who go abroad. Many people go to Africa, for instance, or to the West Indies, for just a few years.

Mr. M. G. Gilling: It will put the postage up by 20 per cent.

The President: Yes, we know that. I shall now take a show of hands on these recommendations.

The recommendations appeared to receive unanimous approval.

The President: We cannot let this meeting end without according to Mr. Cleeve Barr and his Committee a very hearty vote of thanks for the work which they have done.

The vote of thanks was carried by acclamation.

Mr. Kenneth Campbell: I should like to move a very hearty vote of thanks to the President for his conduct of this meeting.

The vote of thanks was carried by acclamation.

Fire Protection

by Eric Bird, M.B.E., M.C. [*A*], and S. D. Studd

Given at the R.I.B.A. 25 November 1958. Mr. J. H. Forshaw, C.B., Vice-President, in the Chair

STRUCTURAL FIRE PROTECTION TODAY

by Eric Bird

Technical Research and Education Officer, The Building Centre

THE FIRST OBJECT of fire protection is to ensure safety of life; the second is to preserve from damage, resulting from the occasional inevitable outbreak of fire, the activities (or occupancies) housed in buildings. Occupancies are usually of greater value, both intrinsic and monetary, than the buildings themselves.

Fire protection can be subdivided into three parts namely: (1) Fire prevention, which is or should be mainly the concern of the occupants of buildings. (2) Fire fighting which is the business of firemen, but which includes attack on incipient outbreaks with hand or automatic equipment. (3) Structural fire protection which is the responsibility of architects and local authorities. This last is the subject which I shall principally discuss.

When an aircraft crashed into the Empire State Building, hurling some 1,500 gallons of flaming petrol into it, the New York Fire Brigade were able to fight the fire at a height of 700 ft. above the street, getting it under control in 19 minutes and out in 40, while the occupants of the 10 storeys above the fire were able to walk down through the protected staircases to safe storeys below. That achievement was made possible only by the proper application to the original design of structural fire protection principles.

The Principles of Compartmenting

The confining of a fire to manageable dimensions in a large building means its subdivision into a series of fire-tight compartments. The simplest and a traditional example of compartmenting is the subdivision by means of fire-resisting party walls of a terrace of dwellings which otherwise would form a single fire risk. Today we have to create superimposed compartments in multi-storey buildings.

This has two features. First, the use of structural elements of known fire-resistance and appropriate grade to form the boundaries of each compartment and the supports in it. Second, the use of various devices, principally fire-resisting doors, to prevent fire passing between compartments through the essential openings of doorways, stairs, lifts, windows and ducts.

The fire-resistance of most types of structural element in use today has been determined at the Fire Research Station at Elstree and published in National Building Studies Research Paper No. 12. This feature of compartmenting is now reflected in building byelaws and fairly generally accepted, though there are still far too many instances in new building where reinforced concrete floors are supported on unprotected steel-work and where enclosure by structural elements is incomplete, revealing that the designer has not understood the basic principles of compartmenting.

Much less well understood and practised is the protection of openings. Without such protection, the use of fire-resisting construction is almost useless because fire can pass throughout the building, destroying the contents, endangering lives and leaving nothing but a fire-racked shell. All staircases and lift shafts in multi-storey buildings ought to be enclosed in vertical compartments of fire-resisting construction and cut off at all levels by self-closing fire-resisting doors. This arrests the especially dangerous 'flue-effect' of hot gases and smoke, which otherwise will rise quickly by convection up the shafts of stairs and lifts. The all-too-common provision of an open 'grand' staircase in a multi-storey building, together with protected escape stairs elsewhere, as is to be seen, for example, in many provincial hotels is, in my opinion, dangerous because the flue effect is not arrested. An air temperature of 300° Fahr. is lethal and this can be quickly attained in upper floor corridors and thus prevent persons reaching the protected escape staircases. Moreover there have been many cases of fires in basements igniting roofs, with little if any damage in intermediate storeys.

Escape in Multi-Storey Buildings

This brings me to the second requirement—that occupants of buildings should be able to escape easily to a place of safety. A 'place of safety' is not necessarily outside the building, though 'getting the people out' is a tradition in fire-fighting. In a properly compartmented building another compartment, even a protected staircase, is a place of safety. It should be noted that in the Empire State Building fire, the occupants did not need to leave the building.

In this connection a proposal for hospitals has been advanced by the Fire Panel of the Nuffield Provincial Hospitals Trust. If ward blocks are constructed with two or more compartments on the same level, safety for patients can be achieved by wheeling their beds from the compartment affected into adjoining compartments, a method that is quicker and far less likely to injure the patients than transporting them down and out by lift and staircase to the open air. This the Panel termed 'two-stage escape', inferring that in the unlikely event of the fire growing to uncontrollable dimensions the compartmenting would give time for the necessarily slow evacuation of patients by the staff.

Two recent contrasting cases in England illustrate strongly the difference between structural fire protection and its absence. A considerable fire occurred in the parcels dispatch department of Selfridge's store during the winter sales when the store was full of customers. This building is of fire-resisting construction and compartmented, and it is also fitted with sprinklers and automatic fire alarms. So well did the structural fire protection operate that hardly any of the customers even knew of the fire and the business of the store proceeded while the London Fire Brigade extinguished the outbreak. In contrast, a similar store in Manchester, not of fire-resisting construction, not compartmented and not sprinklered was completely destroyed by a fire which spread unimpeded through the interior, fortunately at a time when customers were not present.

Fire Fighting

The third requirement—that firemen must be able to fight a fire at any level—is to a large extent met by proper compartmenting and the protection of staircases. But in tall buildings, pressure water supplies should be available through wet or dry risers on all storeys and a firemen's lift—one that can be controlled when necessary only by firemen—helps them greatly in their attack on an outbreak at high level.

Today we have abandoned the idea that buildings should be of restricted height and aligned on street frontages so that firemen shall be able to reach any part by ladder. Tall buildings, in which this is not possible, will be dominant features in the future urban scene, whether offices, blocks of flats, hotels, hospitals or technical colleges. To be safe, such buildings must be constructed and equipped according to the principles which I have outlined. The requirements for and methods usable in fighting fires in such tall buildings have been admirably set out by Mr. F. W. Delve, C.B.E., Chief Officer of the London Fire Brigade, in a paper he gave at the 1957 Conference of the Institution of Fire Engineers. If these principles are adopted I think there need be no limit to the height and cube of buildings, from the point of view of fire safety. (See page 136.)

Other Types of Building

So far I have discussed this subject mainly in terms of the multi-storey building. There remain four other principal types which we are building now and which we are likely to continue building.

The Small House. Of the ordinary two-storey house little more need be said than that the standard of safety set by traditional construction, as specified in the building byelaws, is accepted as tolerable. But any divergence from traditional construction needs to be carefully examined to make sure that this standard is not reduced. An instance of such reduction has been in some cases the substitution for the traditional plaster on walls and ceilings of lining materials which can suffer from spread of surface flame. Another has been the installation of ill-considered designs of non-traditional flue.

The Horizontal Building. This type is widespreading, of two to four storeys, used as a school, office, block of flats, small hotel, clinic or institution. Schools are taken care of by the requirements of the Ministry of Education as set out in their Bulletin No. 7 whose provisions are satisfactory—for a day school user. The standards set in Bulletin No. 7 could well be adopted for two or three storey office buildings and similar low fire load occupancies where the occupants are alert and awake. But where there is what is termed a 'sleeping risk', as in a hotel, hostel, block of flats or boarding school, compartmenting of the storeys with one hour fire-resistance seems desirable. This infers, among other things, the enclosure of all staircases with fire-resisting self-closing doors.

An industrial user in such a building is quite another matter and with some hazardous or high fire load trades may well call for two hour fire-resisting compartments. It is this type of factory building which, when not compartmented or having unprotected steelwork, most suffers disastrous fires—fires which are a great strain on fire brigades and a danger to firemen and which not infrequently bring ruin to their owner's business.

A similar degree of structural safety, that is to say compartmenting with two hour fire-resistance, is necessary I suggest in two or three storey buildings which have an 'infirmity risk' such as hospitals, nursing homes, maternity homes and homes for the aged, in which the occupants must be carried or helped to safety. The use and conversion of obsolete mansions for such a purpose, in my opinion, can be highly dangerous. It was in a building of this kind that the Effingham hospital disaster occurred in the United States in which some 80 persons died, and Dell Wood maternity home in Surrey where twelve babies died as a result of a defective flue in a room beneath their ward.

The Large Single-Storey Factory. The single-storey factory is tending to replace the old mill-type building as linear mass-production processes are increasingly adopted. These processes demand buildings of great horizontal extent, sometimes even more than one million sq. ft. of floor space. Production methods prohibit compartmenting except the separation by fire-resisting walls of store and sub-departments, though manufacturers are notoriously lax and ignorant of the possibilities in this direction—at least they were until the Jaguar fire last year administered a salutary jolt.

These huge buildings with their unprotected steel space-frame roofs, require an approach in respect of fire protection which is quite different from that needed in other building types—and one on which there is little basic research as yet. I discussed this problem at some length in an article published in the November 1957 R.I.B.A. JOURNAL and shall not now repeat what I said there. But I would emphasise the apparent value of automatic fire vents in the roof to allow heat to escape, thus lengthening the life of the steelwork and giving firemen more time in which to extinguish the fire before the roof comes down on their heads. It was collapse of steelwork through confinement of heat which was most responsible for the greatest industrial fire so far, the General Motor Fire at Livonia in Michigan where the damage amounted to more than 50 million dollars. A recent American practice is to provide 'curtain boards' or wide hoods over fire-hazardous items of plant, terminating in automatic vents in the roof, so that heat and smoke are canalised out of the building. But a much wider adoption of automatic sprinklers by British industry would greatly reduce the present annual figure of £12 million of industrial fire damage.

The Public Assembly Building. The safety of human life is dominant in the public assembly building. The technique of planning exits from such buildings—a technique which calls for close attention to detail, often apparently trivial—is on the whole well understood by the architectural profession, even though there is no universal code to govern practice. In the absence of such a code, many architects wisely follow the rigid rules of the London County Council in regard to provision, planning and detailing of exits, even where the local authority in whose area they are designing a building does not require so high a standard or, in some cases, no standard worthy of the name.

In recent years we have been fairly free in Great Britain from disasters in public assembly buildings, though I have felt distinctly uneasy in some which I have visited. This absence of disasters is due partly to the good sense of most architects but mainly to the watchfulness of the officers in the larger local authorities in connection with the licensing of halls for music and dancing.

Some Notes on Staircases

The difference between an exit and a protected staircase seems to me to be insufficiently understood. A single properly protected staircase escape, for example the type now permitted by the London County Council in blocks of point flats or the one required by them in theatres, is far safer than half a dozen open staircases either inside or outside a building because, if inside, they are prone to become filled quickly with smoke and lethal heat and, if outside, they may become dangerous with snow and ice or even exposed to flames issuing from windows. It should not be inferred from this that alternative protected means of escape should not be provided in buildings other than point flats.

Swedish point flats have a single central staircase, without day lighting. To those who do not know of the elaborate precautions in the form of compartmenting flats, solid entrance doors to each flat, protected balconies, hydrants on alternate landings and smoke vents, these flats appear at first sight to be death-traps. But I have been informed by the Chief State Fire Inspector of Sweden that there has not been one death from fire in a point flat during the 37 years that this type of building has been permitted in Sweden.

It seems therefore that we do not have a monopoly of ideas on means of escape nor indeed on fire matters in general, and that we can learn from other nations who are faced with similar problems. For many years it has been a practice in American skyscrapers to place lift batteries, lavatories and escape staircases in a centrally-placed 'core' of the building, all without natural lighting. The plan of the Empire State Building is an example. In this country we place escape staircases on outer walls where they can obtain daylight and where they occupy valuable space which might otherwise be used more profitably. Certain safeguards in respect of artificial lighting, double cut-off doors and smoke vents in what Americans term 'smoke-proof towers' are necessary. But it seems to me that the internal escape staircase is a technological device we could well adopt in this country. It has been proved safe in the United States.

There is, however, one important feature of staircase escapes which requires mention. They need to be maintained in good working order. Too often they are found to be blocked or partly blocked with boxes or pieces of unwanted furniture, or smoke-stop doors are wedged permanently open thus admitting the deadly flue-effect. The escape staircases of assembly buildings such as theatres and cinemas to which local authority officers have access at any time are usually kept in good order. Factories are similarly open to the factory inspector. But local authority officers have no right of entry to other buildings unless invited. It seems to me that, if the community wish for economic reasons to erect tall buildings, they should be compelled to submit to inspection of such buildings at any time by local authority officers in order to ensure that the means of safety for the occupants is maintained in good working order. Until this is done, we shall have to rely on the excellent propaganda among building owners at present undertaken by the Fire Protection Association.

The Development of Structural Fire Protection

It is, I think, worthwhile reviewing briefly the development of modern structural fire

protection in Great Britain, because this allows us to assess the present position. Mention should be made first of the excellent pioneer work early in this century of the British Fire Prevention Committee, in whose operations the R.I.B.A. took a leading part. But research in the modern sense really began with the establishment in 1932 of B.S. 476, now in its revised form entitled *Fire Tests on Building Materials and Structures*. This B.S., among other matters, established methods of testing structural elements against a time-temperature curve allowing their fire-resistance to be ascertained and graded in hours. The opening of the Fire Research Station in 1935, built by the Fire Offices Committee, provided the means of making the tests. In 1946 the Fire Offices Committee presented their station to the then newly-formed Joint Fire Research Organisation which is a section of the Department of Scientific and Industrial Research. The Fire Research Station has become part of it. It is perhaps worth noting that B.S. 476 originated in a recommendation of the R.I.B.A. Science Committee.

Another important event, which greatly advanced the technique of structural fire protection and facilitated insertion of the fire grading clauses in the 1953 Model Byelaws, was the establishment in 1942, under the aegis of the Ministry of Works, of what was known as the Fire Grading of Buildings Committee. The Committee's first report, dealing with general principles and structural precautions, was published in 1946 as *Post War Building Studies No.* 20. Their second report, published in 1952 as *Post War Building Studies No.* 29, covered means of escape, fire-fighting equipment in buildings and flue construction.

These two documents at present form the technical 'bible' of structural fire protection. Inevitably many of the recommendations in them are matters of opinion, though the Minister of Works, in convening the Committee, was careful to appoint persons who together covered a wide range of technical knowledge. The Committee in fact formed a consensus of the most expert opinion then obtainable.

Last year the British Standards Institution (in 1957) appointed a committee to draft a Code of Practice on Protection against Fire. This Committee has—I think correctly—taken the view that structural protection and means of escape ought to be considered in terms of building types, instead of trying to formulate general rules which would be applicable to all. They have therefore begun by studying multi-storey blocks of dwellings and will doubtless proceed to other types in due course.

When *ad hoc* committees have reported they cease to exist. From that moment, new research findings, new fire incidents, new types of building and occupancy and new ideas and new forms of construction begin to render their reports out of date. There seems to be a need for a permanent central technical body to study what is a continuously developing technique, to establish and recommend rules for general adoption in building and to draw attention to matters which need study. Because the wide field of fire protection is not wholly covered by any one government department or institution, I suggest the establishment by the government of an Advisory Council for Safety in Buildings, somewhat similar in form and standing to the Royal Fine Art Commission. This could be a small body of acknowledged experts and should not, I suggest, be merely one of representatives of Ministries and Institutions. Its findings would carry weight and help towards uniformity in practice and legislation as developments proceed.

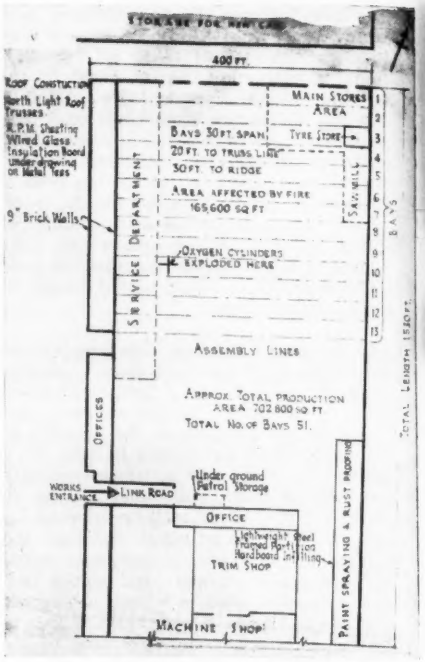
Fire Protection at Present

The present position appears to be somewhat as follows. A great deal of basic research has been done, but much still remains to do. Perhaps because of this and because the research is of recent date, many architects and many local authority officers have a much weaker grasp of the technique of structural fire protection than they have of other and longer-established techniques such as sanitation, structural stability, heating and ventilation and even insulation. Moreover expert opinion in the formulation of rules must for a long time play an important part, because the growth of fire in the many varieties of building complexes and the clutter of combustibles which mankind seems to need today is not easily predictable. Means of escape, also, is not amenable to scientific measurement and someone must say what the rules ought to be, hence my suggestion of an Advisory Council.

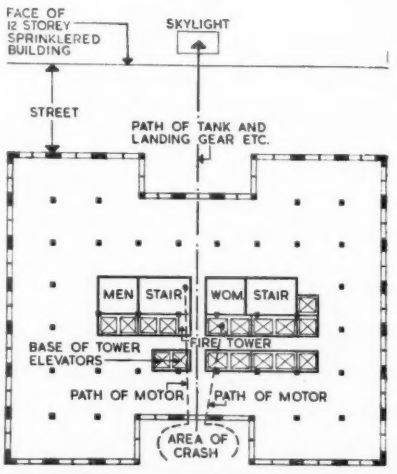
Nevertheless, the principles of structural fire protection are now fairly well established and form a subject which can and should be taught to students of architecture. I myself have been doing this in the Architectural Association School of Architecture during the last five years. I do not suggest that architects need to know all the complexities of fire protection any more than they need to be expert in the other specialist techniques which are embodied in present day building. But they should be conversant with principles. If they were there would be at least fewer cases of plans having to be altered after submission to local authorities for approval. Structural fire protection begins on the architect's drawing board.

In the days of the British Fire Prevention Committee, architects took the lead in an effort to obtain fire safety in the changed urban conditions brought about by the industrial revolution. They have spearheaded many similar causes on behalf of the community, but in this one they seem now content to fulfil the requirements of byelaws—and to grumble at them. They are justified in grumbling because the byelaws are imperfect and the administration of them sometimes unsound. But the remedy is in their own hands.

Today the community is demanding larger and larger buildings. Architects have so to design them that full value is obtained

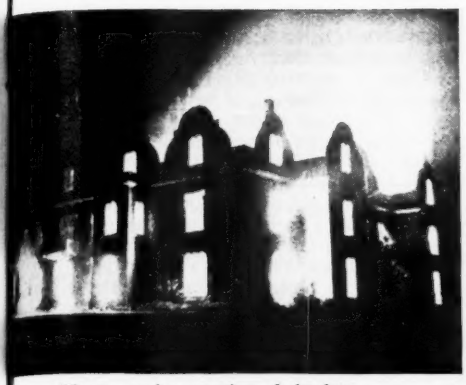


Plan of the Jaguar factory at Coventry. The fire started between the tyre store and sawmill. These are now enclosed in fire-resisting walls



Seventy-ninth storey of the Empire State Building into which an aircraft crashed

for the capital expended. Structural protection is, after all, an overhead charge on building which has to be paid to ensure safety. The present conflict of ideas between architects, firemen and the officers of local authorities responsible for building seems to me a waste of effort. Co-operation would help towards more fruitful expenditure of that overhead charge and the attainment of standards of safety in which the community could have confidence.



The use and conversion of obsolete mansions as hospitals, nursing homes, maternity homes and homes for the aged can be highly dangerous

Fire-resisting construction, without protection of openings, allows fire to pass throughout the building, destroying the contents, endangering lives and leaving nothing but a fire-racked shell

A department store, without structural fire protection, completely destroyed

Left: In a properly compartmented building, another compartment, even a protected staircase, is 'a place of safety'

Bottom, left: Outside Staircases may be exposed to flames issuing from windows

Bottom, right: The Wyncoff Hotel, Atlanta, Georgia. A building of fire-resisting construction but with the single staircase not cut off with self-closing doors. Casualties 119 dead and 100 injured

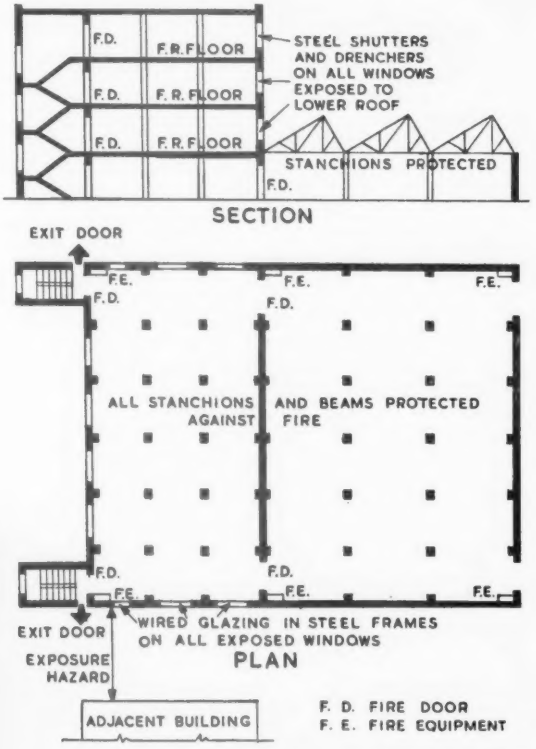


Diagram illustrating compartmenting. There are seven compartments including those of the two staircases

ERIC BIRD

WHITHER FIRE PROTECTION?

by S. D. Studd

Chief Building Surveyor, Architect's Office, Manchester Corporation

MR. BIRD HAS DEALT in a very comprehensive manner with the fundamental principles of structural fire protection on buildings. I want to look at this problem now from an entirely different point of view. For my sins I have been responsible in the last 32 years for the administration of building laws. During that time I have met many architects who have expressed to me in no uncertain terms what they think about the laws I have had to administer. It might not be inappropriate, therefore, this evening if I have a look at one or two of them, perhaps take them to pieces, and look a little into the future. I have therefore called my talk 'Whither Fire Protection?'

The Problem and its Scope

When the Minister of Housing and Local Government was re-drafting the Model Building Byelaws in 1952, several new byelaws, based on recommendations made by the Committee responsible for the Report on Fire Grading of Buildings, were introduced.

The Minister at that time expressed the hope that the new byelaws, which were aimed to secure a more precise assessment of fire risk and the protection afforded by structures, would add to safety and reduce the heavy annual losses from fire, while at the same time avoid excessive structural safeguards.

These byelaws which are now administered by most provincial local authorities will cease to have effect without the consent of the Minister after 1963.

In the meantime the officers of the Ministry will no doubt take the opportunity to examine the present model, and in the light of the many advances which are being made in the scientific knowledge of structural fire precautions, consider what further action is necessary to provide every building, its contents and its occupants, with an improved standard of fire protection.

Many highly responsible officers in the Fire Service are convinced that unless more effective statutory powers are made available to enforce proper precautions against fire, there is little likelihood of any appreciable reduction in the annual fire losses in buildings.

This could, therefore, be an appropriate time to take stock of the existing legislation, to ask ourselves if the 1952 byelaw amendments are achieving the hoped for measure of protection and examine the need to improve or extend the present provisions.

The whole field of safety precautions against fire in buildings is a vast one, and has many aspects involving the protection of the building and its contents, the control of fire spread within the building and to neighbouring buildings, safeguarding the lives of the occupants and measures to prevent fire and extinguish fire.

There is no simple solution to these problems which can be readily translated into a Penal Code of Practice.

Structural fire protection of buildings is not a modern technique—its effective application dates back to the time when Parliament gave the City of London powers under the Building Act of 1667 to require among other things substantial construction of the carcase of buildings including the provision of fire resisting party walls and the covering of roofs with incombustible materials.

At a later date provincial local authorities began to follow the pattern set by London, consequently most local byelaws have for many years contained provisions which materially assist in limiting the spread of fire between buildings, and have as a consequence reduced the risk of major conflagrations which were such a familiar feature before the introduction of the 17th-century Act.

In our anxiety to widen the scope of existing fire protection laws we should occasionally remind ourselves that a very large proportion of our older buildings, erected in compliance with these earlier byelaws have, over the years, provided useful accommodation for their owners, managed to avoid the ravages of fire, and are still structurally sound.

Many of them do not measure up to our present day standards of structural safety and may in some instances be considered high fire risks, but are these risks not due to hazards of occupancy rather than the combustible nature of the building structure?

It is an unenviable task to try and persuade an owner of such a building who has enjoyed long occupancy free from loss by fire that his premises are below some hypothetical standard of fire safety.

We must not, however, assume that because a large percentage of buildings have been immune from fire for long periods our search for effective fire precautions is unnecessary.

The Fire Protection Association inform us that material fire losses in buildings amount to some £26 million annually and that these disturbingly high costs have far-reaching consequences. They say that 'the ravages of fire are not the concern of the victim or the insurance company alone—the true loss cannot be measured in terms of money. The loss to the country in production and in exports is incalculable'.

When we recall some of the heavy fire losses which have occurred in buildings during recent years we realise how true these statements can be.

But in our moments of sober reflection we might care to remember the victim who loses an outmoded building, and by reason of wise insurance investment, secures the benefits of a re-erected modern structure, or indeed, the advantages that occasionally fall to a local authority by improved development.

Let us not overlook the fact that in some major fire losses there may be long term advantages to the victim, his employees and to the community.

This is not to imply that we should encourage destruction of buildings by fire.

If we cannot expect any appreciable reduction in fire losses because existing powers are ineffective and the national economy cannot continue to sustain these losses, what positive action should be taken to secure an improvement and what form should it take?

Before any government can be persuaded to extend the present legislation the case for improvement must be placed beyond all reasonable doubt.

What reliable evidence is there to support the view that there is a need for further legislation to assist in reducing fire losses?

Fire Statistics

Prior to 1946 no factual data covering fires in all classes of buildings appears to have been available.

During the past ten years, however, the Department of Scientific and Industrial Research and Fire Offices Committee has prepared a statistical analysis of reports of fires attended annually by fire brigades in the United Kingdom.

From this analysis it is now possible to obtain a slightly clearer picture of our problem. In England and Wales approximately 45,000 fires occur in buildings annually of which approximately 25,000 are fires in dwelling-houses and flats, leaving a balance of approximately 20,000 in all other types of buildings.

It is also important to note that 'the greater part of fire losses can be attributed to a comparatively small number of fires'.

Of the £26 million fire losses in 1957—4 fires cost a total of £5 million, 20 fires cost £4 million, and a further 200 fires cost £7 million, while the remaining £10 million were spread over 119,000 small fires.

The latest published statistics contain much information with respect to the probable causes of fire in buildings, the number and type of buildings in which fires occur, but they contain no information as to the extent of damage in different types of buildings or the possible reasons for fire growth.

A mass of useful data is gradually being collected. This will, in time, enable a more accurate estimate to be made of the causes which influence the development and spread of fires. There is, however, an urgent need at the present time to extend our researches into the reasons why very small fires can so rapidly develop and become uncontrollable conflagrations. If every small fire could be brought under control before it had a chance to develop, there might be no need to impose more stringent structural fire precautions.

For a number of years there has been a vast amount of scientific research into the cause and effect of fire in a wide range of buildings, all of which is now available to assist those whose responsibility it will be to prepare future fire protection laws. One

factor has become clearly obvious from these studies, that most fires in buildings are due to carelessness. It is a familiar truth that in matters of fire, man is by nature a thoughtless and irresponsible creature. Arising from his carelessness springs the need to protect both the building and its occupants from the consequences of his actions.

Existing Structural Protection Laws

We should, therefore, begin our review of structural fire precautions on the assumption that whatever protective measures are adopted, fire losses in buildings will continue to occur for many reasons, few of which can be controlled by statute.

In general throughout England and Wales, with the exception of London and a few city authorities who have promoted Local Acts, the provisions which control structural fire precautions in buildings are contained within byelaws based on the Minister's Model Building Byelaws.

In addition to these statutory provisions the Fire Grading of Buildings Report provides a most comprehensive review of the whole field of fire precautions in buildings, and has come to be regarded, even though it is now in need of revision, as a most advanced and enlightened advisory Code of Safety Precautions, available for the guidance of all who wish to take advantage of its recommendations. When to these we also add the provisions contained in the Fire Service Act, 1947, which confer powers on all fire brigades to give advice on fire protection without cost to the applicants, one wonders why devastating fires resulting in the complete destruction of buildings are still possible.

The reasons may not be far to seek. The limited fire protection provisions contained in building byelaws do not apply to buildings erected before 1953, and there is no statutory obligation on the part of building owners to seek or accept the advice of their local Fire Service, or adopt the recommendations contained in the Fire Grading Report. The byelaw provisions can become effective only when a new building is to be erected or alterations or additions are made to existing buildings.

Fire Resistance of Elements of Structure

The present byelaws contain provisions designed to minimise the spread of fire between buildings by requiring various parts of the building to resist fire for specified periods. These requirements follow closely the recommendations of the Fire Grading Committee which show how the fire resistance of certain elements of structure can be equated to what has now become known as 'Fire Load'. This has enabled a classification of buildings to be made according to the degree of fire risk represented by low, moderate or high fire loads.

For the various classifications, which are more commonly described as occupancy gradings, the byelaws prescribe notional periods of fire resistance for certain elements of structure ranging from ½ hour to four hours according to use category—that is, whether the building is a domestic building, a public building or a building of the warehouse class.

These structural safeguards are based on the assumption that for byelaw purposes all fire loads are constant within the same occupancy grading.

For example: If a warehouse class building used wholly or predominantly for storage exceeds 250,000 cu. ft. or exceeds 75 ft. in height, the external walls, load bearing walls, floors, columns and beams are required to have a fire resistance of four hours.

These requirements do not, however, take into account the fire load represented by the nature of the materials stored which could have a very low or an abnormally high fire load potential, moreover, whatever the degree of fire resistance required for any separating walls, they need not be imperforate to resist the spread of fire, but may contain openings with doors or shutters having a fire resistance of half the period required for that of the wall. Unless these provisions are extended to require the doors or shutters to be self-closing, separating walls will have little value as fire and smoke barriers.

No relaxation in structural fire resistance standards is permitted whatever the fire load represented by the occupancy hazard. Nor is any relaxation permissible if the building is fitted with a sprinkler system or an effective fire alarm system.

This omission to acknowledge differences in fire hazards by reason of usage is a major factor for consideration during the forthcoming review of the Model Building Byelaws. It is indeed a factor which has come under review recently by the Advisory Committee on the Control of Construction of Buildings in London. Dealing with the question of emphasis in byelaws on protection from fire the Committee reports—'there should be a more detailed subdivision of buildings from the fire risk point of view based on the categories of use and the degree of fire hazard associated with that use'.

Some criticism of the present byelaw standards to safeguard the building structure from damage by fire has been made by the Committee appointed to examine the law regulating buildings in Scotland. 'There is scope for argument' says the Committee, 'as to how far building control should go towards ensuring that every building should have a good chance of resisting complete burn-out should there be a fire.

'So long as the structure is such that there is no risk to other buildings and the occupants of the building itself can readily escape before it goes up in flames, it may be asked whether it is justifiable for building requirements to force an owner to erect a building which would have a greater resistance to fire than he would otherwise be prepared to accept.'

Now that we are approaching the date for the revision of provincial building byelaws these views are of special interest. They are a clear indication that our first serious experiment in the field of structural fire precautions is in need of careful overhaul.

We are being constantly reminded that it is not in the interests of the national economy to allow buildings to be erected with readily combustible structural elements.

It cannot have been a very serious consideration when during the redrafting of the model byelaws a byelaw was introduced which permits the erection of a single storey public building of 100,000 cu. ft. with combustible external walls, or a storage building of unlimited capacity, provided the building complies with certain specified distances of isolation.

Buildings of this nature may not, by reason of their isolation, involve their neighbours if fire occurs, but the whole structure and its contents may rapidly become a total loss.

It is also difficult to understand why the present byelaws impose siting restrictions on buildings of light frame construction even when clad externally and internally with materials possessing a reasonably high degree of fire resistance, but at the same time place no restriction on the use, in buildings of high fire load classification, of large areas of external glazing which may not afford any resistance to fire.

During the drafting of the 1952 Model Building Byelaws a new provision was introduced to require openings in external walls which were vertically above one another to be suitably protected so as to prevent the spread of fire from lower to upper floors.

This requirement can be met by the provision of solid walls of a specified depth between the head of one window and the cill of the window immediately above, or by providing balconies with solid floors constructed between the lower and upper windows, projecting 2 ft. from the wall and extending laterally beyond each limit of the overlap.

Architects have complained that this byelaw was not only hastily conceived and introduced before conclusive evidence was available to justify its inclusion, but has a most restrictive effect on the design treatment of elevations.

An investigation is, however, being carried out at the Fire Research Station in order to establish the part played by the external walls of multi-storey buildings in restricting the spread of fire vertically on the face of a building.

If the present exacting standards of fire resistance for walls, floors and structural supports are essential, should not similar standards apply to roofs?

The roof of every building is surely an important element in preventing fire spread.

Roofing byelaws are designed to afford protection against spread of fire into the building or to adjacent buildings. To this end the byelaws contain a list of roofing materials which are deemed to satisfy the fire resistance requirements. One of these permitted materials—metal sheeting covered on both inner and outer surfaces with bituminous material—was the material

used on a large factory which became involved in fire and proved to be the major factor which contributed to the heavy fire loss sustained.

A roof which has an external veneer of fire resisting material affords little protection against spread of fire from within the building if the covering material is simply supported on a combustible frame which is itself exposed to attack by fire. The byelaws contain no provisions which require a roof to be adequately fire resistant to internal fire.

Cubic Extent of Buildings

During recent years a number of devastating fires have occurred in premises where large undivided floor areas appear to have aided the growth of the fires. These occurrences give weight to the argument that large scale fire losses could be reduced if every local authority had the power to enforce cubical limits on the size of compartments.

The case for sub-dividing buildings into small fire resisting cells or providing automatic sprinklers where an optimum size is exceeded, is gradually gaining support.

A few authorities have statutory powers to impose limits of 250,000 cu. ft. in certain classes of buildings unless special precautions are taken, but the imposition of such an arbitrary cubical restriction will find little support until there is more reliable data to establish the optimum size of compartments, beyond which special precautions are required. This must obviously vary with different types of occupancies. It is important, however, if there is to be any general exception to cubical limits to ensure that they will be more closely related to the purpose for which the building is used.

Safe Escape from Buildings

Measures to reduce fire hazards in buildings are gradually emerging from the trial and error stage to one where applied science is providing reliable technical data on which safety requirements can be based.

No such information was available during the drafting of legislation to provide safe escape for the occupants of buildings.

The principal legislation for the safeguarding of human life from fire in buildings which is contained in the Public Health Act, 1936, and the Factories Act, 1937, provides that the means of escape shall be 'such as may reasonably be required in the circumstances of each case or as the authority may deem necessary'.

Neither Act gives any guidance as to how these essential safety precautions can be achieved.

Mandatory provisions of this nature give rise to difficulties in administration, provide a variety of interpretations and tend to bring the law into disrepute.

Modern research has shown that safe escape from buildings depends largely upon the accurate assessment of the life risk, the measures adopted to prevent escape routes being attacked by fire and rendered unuseable by smoke and hot gases and the provision of properly enclosed staircases.

The ever changing concept of structural fire precautions has from time to time caused much confusion of thought and produced a number of conflicting recommendations.

There is always the danger that we may, while searching for perfection, overreach ourselves by imposing exacting requirements which are unrelated to potential fire hazards.

There is, moreover, a growing body of opinion that some of our present standards of structural fire resistance are excessively stringent.

Our failure to effect any appreciable reduction in fire wastage during recent years underlines the essential need to examine carefully every aspect of the causes which assist the development and growth of fires in buildings.

There can be no better summary of our present needs than that contained in the Fire Research Board Report for 1956, which says 'with the increasing use of new materials, new forms of construction, new designs of buildings and new demands from industry, a more fundamental approach to the whole problem of fire protection has become necessary'.

How is the approach to be made?

Our first experiment in the field of structural fire precautions has provided a higher standard of fire resistance for certain elements of structure than was previously required.

These standards must inevitably tend to reduce the risk of total collapse when buildings become involved in fire of high intensity.

They will not, in every case, provide improved protection against spread of fire within the building or to neighbouring buildings, nor will they assist in reducing fire losses in buildings built before the operation of the 1952 building byelaws.

Future Fire Protection

What of the future? If we are to make a serious contribution to the reduction of fire wastage there must be a more radical approach to the unresolved problems of fire protection.

The solution to some of these problems may be within our reach, now that the fundamental principles of fire protection are more clearly established.

If fire protection laws are to be effective in reducing fire losses they must be made to apply to all buildings whether new or existing. It would, however, be unreasonable to expect the present byelaw standards of structural fire resistance to apply to existing buildings in consequence of the heavy costs involved. We must seek other means of minimising the risks of structural fire damage in such cases.

It is becoming increasingly obvious to many fire officers that unless the hazards of use and occupancy of buildings can be brought under more effective control, the present byelaw standards of structural safety will not in themselves provide an assurance against a complete burnout.

The answers to many of our fire protection problems are to be found in the recommendations of the Fire Grading Committee. Where experience has shown that these recommendations, when adopted, have been a contributory factor in the reduction of fire growth, is not this a sufficiently good reason to suggest that they should be given power of enforcement?

The Ministry of Labour and National Service has been looking into the need to extend precautions in factories.

As a result Parliament is now being asked to extend the Minister's powers to enable him to make special regulations as to measures that must be taken to reduce the risk of fire breaking out and fire and smoke spreading in any factory. Requirements may be prescribed with respect to the internal construction of factories and the materials which may be used in that construction.

These extended powers are being hailed by some fire protectionists as a most progressive and enlightened piece of legislation.

We should not, however, overlook the fact that power was given to the Secretary of State under the Factories Act, 1937, to make regulations as to means of escape in case of fire, but no such regulations have ever been made.

But why should the standard of safety in factories be higher than those which are enforceable in other types of buildings?

Is it more important to save a factory building and its occupants than other types of buildings and their occupants?

The life risk in many hotels, boarding houses and hostels can be much more serious than the life risk in many factories.

Fire precautions which are related to the fire hazards should be made to apply to all buildings whatever the fire load classification or occupancy grading.

If we cannot place too much store on the present statutory requirements to reduce fire losses, and a Code of Practice that would provide a high standard of safety against all foreseeable fire hazards in buildings of every classification cannot be prescribed, we might at least begin our second experiment in structural fire protection by considering the adoption of measures to secure a higher standard of precaution against fire, similar to those proposed in the Factories Bill which seeks to amend and add to the legislation embodied in the Factories Acts 1937 and 1948.

The future course and scale of research and investigation into safety from fire in buildings will be influenced to some degree by the interest displayed by the architectural profession.

This vast subject will not, however, be solved by hastily conceived legislation. There must be a process of gradual adoption of safety precautions which are based upon an intensive study of every factor which influenced the safety of the building, its contents and its occupants.

Above all our better judgement must not be clouded by a burning enthusiasm for wider and more exacting powers.

VOTE OF THANKS

The Chairman: We are very grateful to our two speakers, and those most interesting and horrifying pictures we have just seen emphasise the importance of the papers we have had. I am now going to call on Mr. Lawson, Director of the Joint Fire Research Organisation, to propose a vote of thanks.

Mr. D. I. Lawson: I am sure that the Royal Institute of British Architects are to be congratulated on securing for us two such excellent speakers this evening. It is all the more pleasant because I think that we who are connected with fire sometimes think it knocks rather feebly at the door of the Royal Institute. Our two authors must be gratified by the large and eminent audience that has collected together tonight to hear them.

I was interested that both authors mentioned the need for more fundamental knowledge regarding the growth of fire and fire conditions in buildings. It may seem rather remarkable in a country half of whose wealth is in buildings, a country which spends one-fifth of its national income on buildings, that so little is known about the conditions when these buildings catch fire. I think the reason for this is that the subject is a very complicated one. If one thinks for a minute of all the shapes and sizes of building compartments, however, the variety of window openings, the difference in the amount of stored combustible materials, the effect of wind, the orientation of the building to the wind, the whole makes an extremely complicated picture and one cannot hope to have many full-scale fire experiments in order to try to unravel it.

Quite recently we have been carrying out a number of experiments using models, and I think that now we are just beginning to see some of the factors and their importance in this complicated problem. It is no use just making a simple model which is a replica and hoping it will represent the conditions in the building. There is no blue-print for making a model. There are no fixed laws to work on, as in making models of ships and aircraft, in the hope that the conditions in the building will be represented. But we are beginning to see our way a little more clearly than we could previously through this complicated subject.

It seems that all fires have three stages. There is a growth stage where the temperature rises to the value when the room is fully involved in fire. That we know already. This stage is influenced by two factors—the nature and amount of the stored combustible materials and the window openings. After the fire has reached the end of this first stage, there is a gradual rise in the temperature inside the compartment to a maximum, and the time for this depends on two factors only. These are the amount of stored combustibles per unit area (this we have always known and it is recognised in the building regulations) and the amount of window openings in the building. Then there is a third period when the fire dies down again, and the rate of decay of temperature inside the building is slower with small fire load and slower with small window openings. So window openings come into all the stages and fire load into only two.

The second two stages seem to measure the amount of punishment the building gets, and we might note in passing that if we were going to build buildings to be punished by fire we could not build them in a better way than at present. In other words, we choose the amount of window opening that gives the building the roughest road with regard to fire. If we had larger or smaller windows we should be better off.

I am sure that those of us who have heard Mr. Bird and Mr. Studd before know what excellent lecturers they are. Tonight they have surpassed themselves, and I have very great pleasure in proposing a vote of thanks to them.

Mr. Thomas Mitchell, M.B.E. [*A*] (Chairman, Science Committee): The two papers we have heard are complementary and quite deliberately so. They cover the same subject from, as one might say, two different camera angles. Mr. Bird has given a very level-headed exposition of fundamentals, full of rugged common sense and couched in the admirably concise language which one would expect from such a distinguished former editor of the R.I.B.A. JOURNAL. Diplomatic, too, because I am sure you cannot have missed how skilfully he led our thoughts away from the building in which we are sitting, with its monumental open staircase, when he described the horrors and took us to those provincial hotels where he must have spent so many nights in his lecturing to Allied Societies throughout the country, nights which I hope were untroubled by thoughts of what would happen if he could not find the escape staircase.

Statesmanlike also, I think, is Mr. Bird's suggestion for the formation of a government-sponsored council for building safety, and it is one which I would commend for discussion. The Science Committee, I am sure, would be interested to hear people's thoughts about it. I will come back to that in a moment.

Mr. Studd approaches the matter from an entirely different point of view. He, like ourselves, in a way, is at the receiving end, although very much more so, because he has to receive us architects as well. In fact, he is probably much more at the receiving end of the subject than any other type of person represented in the room tonight.

When I read his paper beforehand I was immensely struck by the vast undercurrent of experience and wisdom which it portrayed. Having heard him and seen his slides, I am convinced that he has only been able to show us a fraction of the wisdom and experience which he has on this subject. I could have gone on listening to him and looking at his slides for another hour at least. He has shown us some of the many anomalies which have sprung up on this subject throughout the years. He has warned us of some further impending powers in connection with the administration of the Factories Act. I wonder if he can detect a sigh about the necessity for one more consent coming to us: I am sure architects side with him.

He finished with a warning against hasty legislation which brings us right back again to Mr. Bird's suggestion of an advisory council, because such a council, with continuing knowledge—as he was careful to point out, it must have permanent membership—would be ready to inject into any legislation, whether through Parliament or otherwise, the best knowledge at the time.

I hope that these two papers will attract the discussion which they really deserve and I have very great pleasure in seconding the vote of thanks.

DISCUSSION

The Chairman: I now call on Mr. Lack to open the discussion.

Mr. Kenneth Lack [*A*]: There are two points that I should like to take up very briefly, one from each of the two papers.

First, in reference to the building bye-laws, Mr. Studd makes this statement: 'No relaxation in structural fire resistance standards is permitted whatever the fire load represented by the occupancy hazard. Nor is any relaxation permissible if the building is fitted with a sprinkler system or an effective fire alarm system.'

This is, of course, true, but there is nevertheless provision for relaxation in the Public Health Act, 1936, under which the byelaws are made. In Section 63 of the Act it is stated that where a local authority consider that the operation of any building byelaw in force in their district would be unreasonable in relation to any particular case, they may, with the consent of the Minister, relax the requirements of the byelaw or dispense with compliance therewith. In the cases Mr. Studd was citing, he might agree that the byelaw was possibly operating unreasonably and therefore that this section could be called into play.

The remainder of the section deals with procedure. The process is somewhat lengthy, but provided the difficulty is anticipated early enough, there is no reason why the relaxation, if the local authority think it desirable and the Minister agrees, should not be put through in time to avoid delay.

Turning to Mr. Bird's paper, I should like to develop for a moment the theme of education which he introduced at the end of his paper. I do this with some diffidence, knowing how many experts there are in this hall tonight, but I should like to make one or two very simple suggestions.

Mr. Bird said that many architects and many local authority officers have a much weaker grasp of the technique of structural fire protection than they have of other and longer established techniques, such as sanitation, structural stability, heating and ventilation. One simple explanation may possibly be that the science of fire protection is somewhat in its infancy. But I do not think this is an adequate explanation

of the sense of frustration that I suspect many architects and local authority officers must be feeling.

The principles have been very well developed. Mr. Bird discussed many of them. He referred to publications in which they have been available for as long as ten years. But principles alone do not seem to be enough.

I think the reason for the frustration to which I refer is that there is an essential link between design technique and principle which is too often missing in the mind of the designer. That link is in my view an extremely simple one, namely, a knowledge and appreciation of the behaviour and the properties of fire itself.

There has recently become available a convenient analogy in a Building Research Station Digest which describes in detail how gutters and rainwater pipes should be designed to remove the rainwater from a roof. The Digest makes it clear that the first essentials are how much water there is and where it is flowing. Similarly, in order to design a building safely against fire, it is essential to think about fire—to think about fire first of all, and to think about it all the time.

Mr. Studd at the end of his lecture showed us some slides and described the course of the fire in buildings which had been on fire. It is essential to do exactly the same thing in imagination when the building is in the design stage. That means trying to locate all the possible sources of fire. Then, having found these points, to see in relation to each one how the fire might develop. To ask—What will cause it to develop? Where will it attempt to spread? Where is it necessary to place barriers to prevent it from spreading? Are those barriers adequate for the purpose? And so on, throughout the building.

This approach has been adopted in the Ministry of Education Building Bulletin No. 7, where it can be followed in detail. It is there developed in relation to means of escape, but I believe the same approach is applicable to structural design.

There is one other point. In order to appreciate the character and behaviour of fire it is essential for architects and architectural students and all those concerned with protection against fire to visit buildings that have been on fire—and to visit them with the local fire officer. It is also necessary to make measured drawings of those buildings, the sort of drawings Mr. Studd showed us, indicating on the drawings the course and development of the fire and its effect on the structure. It is particularly important to inspect these buildings in the company of the fire officer, because he is the person who is fully acquainted with fire and can give the necessary information.

In the course of my study of the subject of fire precautions in buildings over a number of years, I have been forced to the conclusion that there will be no substantial improvement in the field of designing for safety against fire unless there is much closer co-operation between architects and fire officers, and the ideal venue for the architect and the fire officer is, in my view, the shell of a burnt-out building.

Mr. F. W. Delve, C.B.E. (Chief Officer, London Fire Brigade): I am grateful for the opportunity—the first opportunity I have had—of speaking collectively to such a large body of architects. I want to seize the opportunity for them to know something of our problem at the present time with regard to high buildings.

There is a wealth of information in both papers, and there are many points any practical fire officer could pick out for fruitful discussion. But you did mention yourself, Mr. Chairman, that time is limited, and if I may, with your permission, I want to concentrate on what I think is the most important matter at the present time, whereby fire service officers and architects are able to understand something of each other's problems.

I was amused by the reference to the fire in the Empire State Building in Mr. Bird's paper, because I had the privilege of going to New York, and the officer who took me over the Empire State Building happened to be the senior officer who attended the fire at the time. As you may know, it took place some years ago. At that time, they were rather handicapped in New York as to the precise orders they should give in attacking fires at that height. They had been taught if the electrical supply to the building was cut off, it would be wiser for firemen not to risk their lives in being conveyed in lifts, which perhaps would fail between floors, thereby exposing them to smoke and fire dangers, and that they had to use the staircase. Well, Mr. Chairman, this officer told me—and I wish I could produce his own description—that mindful of the importance of complying with this order and bearing in mind it was the first fire of this magnitude at so great a height he ordered all his men to carry their equipment, and they trudged merrily up the staircase. When they arrived at the floor where the fire was, lo and behold, all their colleagues had ascended by the lift, and they were greeted with hoots of derision, and the fire was out.

But I want to say this very seriously, because it is a problem, as you know, in London. The tendency, in building, is for buildings to get higher. Mr. Bird has said that provided all reasonable precautions are taken there is no reason why they should not go higher and higher. I agree with that view, *provided the fundamental precautions are taken.*

If I may explain that, first of all each and every fire officer knows that each fire is more or less a battle. There are various things to contend with—the severity of the fire, the direction of the wind, the proximity of adjoining buildings and whether they are going to be involved, the rescue—which is of prior importance—of the occupants of the premises, and matters of that kind. Moreover, simultaneously you have to decide, particularly if you are finding it difficult to gain access to the fire, about ventilation—when to ventilate and when not to. That is another subject that deserves more consideration.

One of the speakers referred to automatic ventilation. Let me add a note of caution here. This is all right in a single-storey building, but in a multiple storey building it can lose the whole building and cause untold consequences. I advocate caution there.

The fire officer, having decided his plan of attack in buildings under 100 ft. in height, can carry the plan into effect, if he can gain access to any part of the premises he desires, because he has the appliances to carry out the work. But when the buildings are more than 100 ft. in height, there are two fundamental problems.

First and foremost and of the greatest importance, although both are extremely important, there is the safety of the occupants of the premises, and means of escape are of vital importance. Linked up with that, is the safeguarding of firemen in fighting fires, because at that height the officer in charge will not be able to select his own battlefield but will have to work to predetermined bridgeheads—if I may use that term—where the fire operations will centre.

That lesson, let me point out, which I was going to emphasise before I had seen the slides, is underlined by them. Both speakers have referred to means of escape. Everyone refers to means of escape; regulations and byelaws say alternative means of escape. But bless me, I have had discussions with individual architects, and I have been amazed sometimes that they have interpreted alternative means of escape to mean to provide two means of escape. That is not enough, so far as the fire brigade is concerned, particularly in very high buildings. What is missing is that the positioning of the exits and the positioning of the fire escapes is of the utmost importance, particularly in buildings exceeding 100 ft. in height. In the London Fire Brigade we have given a lot of thought to positioning.

We have had a wealth of experience of normal fires but not those in buildings which exceed 100 ft. in height. Here we come right back to the fundamentals of fire brigade work, the determination of standards of cover. We require a fire brigade to be at a place within a certain number of minutes, in London within five. But what do you achieve if the height of the building and the arrangement is such that you spend ten minutes in getting from the ground floor to the floor of the fire? You are giving the fire ten minutes to gain a further hold and there are problems because you have to fight the fire in one place only. We say even that does not matter provided other things fall in their place.

The fundamental requirements are first that there should be a ventilated lobby staircase and secondly that there should be a lift which is controlled by the fire brigade. Here I might say we disagree with the practice in some housing whereby the lift is sterilised and used only for fire brigade purposes. That would not be a good thing, and I advise against it, in

London. The lift is for general use, but by an arrangement with the wiring coming from an alternative supply and a suitable switch, the fire brigade can gain possession of the lift.

There is a dry riser building going up to 200 ft. in height. We prefer dry risers because we can charge them with their own water supply and it is less costly and more reliable from our point of view, less costly to the man who has to pay for the building.

The important thing, and this is the main lesson, is the positioning of the staircase. We maintain in the London Fire Brigade that the staircase should be on the extremities of the floor.

There is a fundamental principle which is so often lost sight of if you want to make the maximum provision for safety. We have had lessons in London as to the behaviour of persons, the psychological reactions of individuals, when they are confronted with thick smoke. You cannot cater to make full provision to take account of every factor but you can go a long way. It is as simple as this: that whoever the architect may be, he should put himself in any part of a floor and see that if there is smoke it should be possible for the occupants to run away from the smoke but never into it. All our experience shows that people will try to run away from smoke. Mr. Studd illustrated this when he spoke of the two girls near the staircase who would not open a door and chance it because they saw smoke. That happens practically every day in London. You can only achieve your objective if you have the staircase at the extremes.

That offends against architectural tastes and I can concede the point that it does. But I think architects must understand that it is fundamental from the points of view of both the safety of persons in the building and the fire brigade. In the Deansgate fire, if the staircases had been at the extremes of the building no one would have lost their lives. It is only because you have staircases in the wrong places. Your seconder thought of this when he humorously remarked about the open staircase in your hall. Perhaps I could remedy that by saying that in this particular room your exit arrangements are right, because they are at the complete extremes. If a fire happens anywhere in the room, where I am standing I can go out by the door at this side. No one has to pass through smoke. It is as simple as that.

If the principles are thoroughly understood, the only comment I ought to make is that when the hall is in darkness you have not designated the exit!

I could go on for a long time, but I am sure there are other people who want to speak. I do concur in and support Mr. Bird's suggestion that there should be an advisory council. It ought to be thoroughly in practical touch with day to day matters, and I am sure that such a body could give very useful informative advice to the local authorities.

Mr. Studd: I want to assure you that Mr. Lack and I are no strangers. We have known each other for many years and have spent many hours discussing these problems.

I was not altogether unmindful when I wrote the paper of the particular section of the 1936 Act to which he referred. I am afraid that if all local authorities were to appeal to the Ministry on every aspect of building law with which they disagree, Mr. Lack and his colleagues would have a very rough time. I have in the audience also friends of mine in the London County Council, and we have had many discussions as to the powers of waiver that they have in London. But, Mr. Lack, I can assure you that there have been times in my administration of building laws when I would have been grateful for the powers of waiver that you have in London, so that I could have dealt with these things myself without appealing to a higher authority. I agree entirely that if local authorities wanted to exercise these powers they could do so. But I want to deal with this in a much more fundamental manner and say that the time is not very far distant when we are going to revise, I hope, the Model Building Byelaws. Let us really revise them so that there will not be the need to appeal to the Ministry.

Mr. Bird: Mr. Lack made, I think, teaching the principles sound a little more complicated than it is. Architectural students have a lot to learn, and this is only one of many techniques of which they ought to know the principles.

I give three lectures at the Architectural Association School and they are restricted to principles and I use lantern slides to drive home the lessons. I do not try to teach the law, because as you know only too well what goes in London does not go in Manchester, and what goes in Manchester does not go in other places, and one could spend a long time on that. They will come across the law when they are in practice later. Also I sometimes give an additional talk on a school project. I am sure these boys and girls have a pretty thorough grasp of the subject by the time they have listened to my three or four lectures.

I thought at one moment Mr. Delve was going to restart the ferocious argument of automatic *versus* controlled fire venting. This idea of venting fires in single-storey buildings is comparatively new, and we do not yet know all about it. The National Fire Protection Association of the U.S.A. produced an interesting paper this year on venting which contains a lot of information, but they call it a 'tentative guide', and they do not know very much more about it than we do.

Mr. Delve is entirely right about the position of exits in regard to fire fighting. Most people do not realise that the means by which people get out of a building are the means by which the firemen, when the people have got out, promptly go in. They want a safe base from which to operate, and I would refer anyone interested to Mr. Delve's paper which goes into this in very great detail.

I would draw attention to the fact that the R.I.B.A. building was built under the requirements of the London Building Act. I never had any qualms in it; when I worked in it my office was at the far end of a corridor and I had what I considered to be quite safe means of escape. The corridor was shut off by a 2-in. self-closing door, and I should have been quite happy to go on working while a large fire was raging on the other side of the building and the London Fire Brigade were putting it out. But of course I should not: I should have gone out to watch.

Mr. N. C. Strother Smith (Director, Fire Protection Association): I should like to refer to Mr. Studd's reference to the studies of fire reports that the Fire Protection Association carries out for us. These are fire reports which come from every part of the country and in particular every year we study the fire reports of fires which have caused direct damage of more than £100,000.

There are two very notable features which stand out in those fire reports. One of them is the late discovery of the fire and therefore the late call to the fire brigade. The other is that almost without exception the buildings in which these large-loss fires occur are either undivided buildings or buildings in which the openings in dividing walls are left open.

The doors are left open, and one draws certain conclusions from that. The grading of structure appropriate to the occupancy is not anything like as important as the adequate subdivision of the building, and it may well be that a great deal of the damage that is being caused today could be avoided if just that one principle which has been brought out by both speakers was observed—if the buildings were adequately subdivided. These large-loss fires take place in two different types of occupancy—the large single-storey factory building in which there is a large value of property exposed if we have fires, and the multi-storey building in which the fire can spread from one floor and throughout one floor to another. Subdivision in both cases could be effective.

I think Mr. Bird in his paper says a different approach is required for the large factory building. I should like to express some measure of disagreement. I think that subdivision is possible. He himself has indicated that it is possible. Subdivision should go hand in hand with automatic sprinklers. Mr. Bird has referred to them, but perhaps he could have stressed the value of sprinklers more than he has done. There have been some very remarkable fire stops in which sprinklers have played a major part.

In building as a whole, the architect can call in consultants to engineer completely various aspects of a building from start to finish—the electrical engineering and the mechanical engineering—if necessary. But there is no proper facility for calling in anyone to engineer the fire protection of a building. That might incorporate the siting of fire doors to which Mr. Lack has

referred and even go to the extent of the pipework for sprinklers. At present, one is entirely in the hands of the sprinkler engineers. There are no experts who can scrutinise their plans.

All that requires a basic knowledge and these factors are part of the building. I think it is perhaps not too much to say that the primary responsibility can rest with architects to set some pattern, perhaps even to go so far as to establish some proper curriculum of studies.

The Fire Protection Association is hoping—and we have had discussions with a number of people who are here today—to launch a pilot scheme in a year or so in which model lectures might be given which would set a pattern for such education.

Mr. Bird: I largely agree with Mr. Strother Smith's remarks, but with regard to the subdivision of large factories I think we are crying for the moon if we are going to try to persuade modern large factory concerns to subdivide their buildings, other than cutting off minor items like the tyre store at the Jaguar plant, tool rooms, pattern stores and things like that.

The main assembly lines are nowadays of colossal length and getting longer; they are continuous processes which go through the building from one end to the other. As new models are produced or new machines brought in, the plant layout is altered, so they want the maximum amount of flexible floor space. Every factory architect here would, I know, agree with me that manufacturers do not want even a single stanchion if it can be avoided; they want as much uninterrupted floor space as they can get.

A great deal depends on the hazard of the particular occupancy. The Americans are going in for what they call curtain boards—gigantic hoods over the fire-hazardous items on the production line such as paint-spraying booths, dipping tanks, and so on. These hoods come down to within 6 or 8 ft. of the floor and they have the conveyor lines passing beneath them. There are automatic ventilators or sprinklers overhead, or both. I think we have to approach the problem along those lines: if we try to persuade manufacturers to build brick walls across these enormous sheds they just won't do it.

Mr. Studd: May I make two observations in regard to what Mr. Strother Smith said? Firstly, with regard to statistics, I am very pleased to see the number that are now published with regard to fires in the United Kingdom. We are getting a clearer picture, as you will know, from these statistics. It may well mean that Mr. Strother Smith has statistics to which I have no access; but I was careful in my paper to refer only to published statistics—statistics that poor people like me can get at the Stationery Office. You may well have access to statistics I have not got.

I should now like to refer to Mr. Bird's remarks with regard to the compartmenting of single-storey buildings. This is an extremely difficult problem. We have recently had erected in Manchester a building costing nearly £3 million, with single-storey sheds 85 ft. in height. They have two travelling cranes, a lower crane and a higher crane, travelling the length of the sheds. They manufacture transformers weighing up to 250 tons per transformer. How you would compartment these buildings I simply do not know.

I think our fire chief would tell you that the fire risk in this building is absolutely nil. There is practically nothing to burn in these transformers. Not only that, these people themselves have a very efficient fire brigade in the works itself. The whole works are patrolled all day by well-qualified firemen. The fire-fighting equipment is absolutely the last word. I would hesitate, and I am sure my chief would hesitate, to say, 'We think you ought to compartment this building'. We have to have a sense of proportion about this and have to be careful before we go to these people. There are other methods of handling the problem without saying in such cases that there must be compartmenting.

Mr. G. A. Bendell: I think it was Mr. Mitchell who mentioned one more consent, and I have heard mention of an advisory council. I have been interested lately in a Bill before the House of Commons called the Scotland Buildings Bill. This is a Bill which seeks to codify all building regulations in Scotland. It gives the Secretary of State for Scotland power to make regulations under various headings—drainage, excavation, fire prevention and one or two other things. The passing of this Bill will mean, so far as I can see, that all byelaws in Scotland and all other things which took place on byelaws in Scotland will no longer be used, but buildings will be controlled by the new regulations.

The regulations are to be made by the Secretary of State for Scotland, Scotland being a separate country for these purposes, on the advice of an advisory council.

There was a most interesting debate on the subject in what is called the Scottish Grand Committee last Thursday morning in the House of Commons. The ordinary Hansard does not cover that. You have to get the Scottish Grand Committee Official Report if you want to read the debate. There was there much talk of the advisory council and of the regulations, and half humorously during the course of the debate it was suggested that this legislation is so good that a clause should be inserted saying the Bill shall apply to England and Wales.

The SCOTSMAN of last Friday carried quite a bit about this, saying 'Scotland ahead of England'.

This does make interesting reading, and it looks as though Scotland is going to have an advisory council before England. It also looks as though instead of lots of consents there will be only one.

I should like to add on compartmenting that about three weeks ago I had a visit from Colonel Piermarini, the head of the Rome fire brigade. He came to see me because apparently in Italy reinforced concrete construction is being superseded by structural steelwork. He was very worried about the columns and beams and we talked about compartmenting. We both came to the conclusion that in certain types of factories—such as the large engineering shop in Manchester we have heard of—compartmenting was unnecessary. In other factories where many people are employed and there is considerable danger of a rapid spread of fire and a lot of people would have to escape there should be compartmenting.

He staggered me by saying, 'In Italy we build very fine ships and to me they are factories, and they are compartmented by bulkheads which are the subject of international regulations and have to be put in. If ships can be so compartmented—and fire at sea is a dreadful thing—why cannot ships on land, that is, large factories, be similarly compartmented?' I thought it was quite an original thought.

Lieut.-Commander K. N. Hoare, R.N. (Chief Officer, Manchester Fire Brigade): Might I ask one question about the Deansgate hotel fire. I have heard Mr. Studd refer to this fire on a number of occasions and as he comes from the city of Manchester we really ought to be proud that it occurred there!

I was not in charge of the fire brigade there at the time, so I can speak fairly freely, because it is obviously not a monument to the fire brigade's efficiency, so far as the fire was concerned. But I do suggest that the lesson we ought to learn from it is that it is certainly not a monument to the efficiency of the architect who designed the building for this purpose. It could never have been a safe hotel. It is not a monument to the local authority who allowed the developer to put a hotel in that position, in the second place. Thirdly, and really most important of all, the maintenance of the means of escape was absolutely appalling.

This last point I want to take up, because the audience may draw the conclusion that this was an example of an appalling hotel which ought never to have been allowed. I think my colleague Mr. Delve, and some of my other colleagues in the room, will agree with me that any city in this country could probably find places just as bad as the Deansgate hotel, not in one town but in hundreds of places. The fact that we do not get fires there is pure luck. We might get one tomorrow. We just don't know. But it is bound to happen sooner or later.

I recently had the privilege of a visit to Canada and the United States. One thing that struck me more than anything else over there was that the maintenance of the means of escape was a fire brigade responsibility. I do feel that there is certainly a case nowadays for the maintenance at least of the means of escape to be undertaken by fire officers instead of by architects' departments in our local authorities. This may well be a controversial subject, but it is a wonderful opportunity for a fire officer to put it forward.

The Chairman: I will invite Mr. Edwin Williams to sum up.

Mr. Edwin Williams [*F*] (Senior Architect in the Building Regulation Division, L.C.C.): I am particularly conscious at the moment of the difficulty of the task which has been set me, the need for very great speed, and my own utter inadequacy to do the task efficiently.

But first of all I should like Mr. Bird to know that I, and I think we all at the London County Council, number ourselves as his fans. Tonight I should like to add Mr. Studd.

One point I should like to make in the case of Mr. Strother Smith. I feel that far too few architects know of the existence of the Fire Protection Association, and the documentation that they produce on fires, fire protection and fire prevention. I do not know what I should do if I did not have a regular spate of his literature. It is so informative and so instructive, so full of inspiration.

He has done a lot towards publicising this problem of fire standards and fire protection, and we find ourselves in friendly rivalry sometimes at Olympia and other places in trying to put the subject over.

He mentions the difficulties of horizontal and vertical compartmentalisation, if that is a good word. It only serves to draw attention to the dilemma of this whole problem. In fact, there is more than one dilemma. The whole thing is full of dilemmas and complexities. It is a very complicated subject indeed. Hence, it is very difficult to make rules about it, and ultimately one has to leave quite a lot of of it to codes, quite rightly, and keep the rules down to the minimum. There is always the danger that rules will become obstructive and onerous.

Mr. Bird has paid a great tribute to the flexibility of the approach to the problem by the London County Council in talking about the staircase. Although it is true to say that a staircase could in principle be regarded as extremely dangerous, quite a number of dangerous things can become quite safe if handled properly. On the other hand, no amount of rules could make a building safe if you go about the thing the wrong way or unintelligently. In fact, the more rules the more difficult the subject becomes to administer, and possibly the more dangerous the building is by the time you have finished applying them.

Mr. Bendell mentioned the Scotland Buildings Bill, and here I should like to say that we have the advantage in London of a London Building Act. If Scotland is following our example, I think that the next move must be for the United Kingdom to have a Building Act. I am quite sure that London will be very happy to fall into line. That is quite serious, too.

On the problem of compartmenting the fire risks, that is one of the advantages we have under the London Building Act. Under section 20 there is provision for dividing the building into compartments, either horizontally or vertically or both, according to the merits of the case, in very high or in very large buildings.

Mr. Delve and I are continually collaborating on this problem. He has mentioned the particular difficulties of buildings over 100 ft. in height, and how common such buildings are becoming in London! The point I should like to make here is this. As he rightly says, the first thing to watch in planning such a building is the positioning of the staircases, particularly the long approach staircases. This is very important for another reason. He points out that such staircases should come on the exterior of the building and preferably at its extremities, if it has any. That brings them close to the street and notwithstanding Mr. Bird's wistful hope of internal staircases, the position in London is that such fire-fighting staircases should be next to the open air and next to the street.

When you are planning your building you will save yourself enormous trouble if you watch that, because if after having got your plans, gone up for outline town planning permission, got it through and got as far as the London Building Act your plans are turned down flat because you have not done so, you have only yourself to blame. This is fundamental.

Mr. Delve's fire-fighting ladders are only 100 ft. high. I believe Commander Hoare has longer ones. I believe some people have them 140 ft. long. But some are only 100 ft. long and consequently it is very important to have special precautions taken for the storeys that are above say, the tenth floor. When you get a building 30 floors high, as we are now getting, the upper 20 storeys become quite a hazard.

Mr. Lack very rightly points out the desirability of visiting burnt-out buildings or buildings where fires have occurred. I can substantiate that, because I have learned quite 50 per cent of my job from visiting buildings where fires have occurred and finding out the various complicated aspects that come into play. The only thing is that you have to be prepared to be thrown out either by the fire brigade or the police. But then, of course, it is all in a good cause, and you do not mind being thrown out of a building. It is possible you may learn something before you are thrown out.

It was said that there was no monopoly of ideas on this subject and this is probably the truest thing about it. We in London are supposed to have had a lot of experience, and in that connection there is one little point I should like to make. Mr. Studd said that legislation in London began in 1667. Probably that is quite correct. But experience of statutory control and fire prevention began, as far as we know, in 1189 when a certain Alderman Fitz-Aldwyn or some such name promulgated that in future all buildings should have party walls between them and that all party walls should be at least 3 ft. thick and 18 ft. high. If you could not afford to build one, the next door owner had the right to take 18 in. of his neighbour's land and build a 3 ft. thick wall on it and bargain with him if he wanted to build on the other side afterwards. It shows that this is a very old problem in London. Maybe it goes back very much earlier than that, because there were a series of fires, some of which must have taught Londoners quite a lot about fires, particularly when Queen Boadicea tried to burn the whole city down to express her annoyance with the administration.

To come to the meat of the matter, it is quite clear that if we are faced with the revision of the byelaws we do need some better method of revision than what I would call the old citizenship method of cutting up the laws, rearranging them and putting in a few new ones. It is quite true we are in a period of transition from the point of view of architectural design and building construction. Nowadays it is no longer necessary—and Mr. Delve and I have discussed this—to have walls supporting the floors and the rooms of the building. It is not that they can support themselves without any means of support, but there are other ways of supporting them. That leaves the designers free to have enclosures to their buildings that are not load-bearing. Far be it from the fire protectionists unnecessarily to hamper designers. It is a question of maintaining a simple and realistic approach to the whole thing, to see that the principles of good fire protection and fire fighting are facilitated without imposing obstructive and irritating restrictions upon designers and constructionists.

From that viewpoint Mr. Studd and Mr. Bird have done invaluable service. I hope the suggestions that they have made will meet with due consideration in Government circles and that when we come to have our Building (England) Bill, or perhaps even earlier, when we come to the next revision of the byelaws, the whole thing can be tackled comprehensively and that the Government will set up an advisory council to rope in the consultants from the appropriate quarters and get the best of all worlds. As has been pointed out, the architect in this particular sphere has the job of co-ordinating all the things that go to his building, including the fire protection, and the escape. Those things are best tackled in the early stages and not at the cost of mutilating his plans after they are beautifully done and presented.

I am delighted to hear Mr. Bird is teaching this subject. I feel I would like to go and listen at his feet. I only wish I had time to do it. But I feel it is for architects to help themselves in this particular matter instead of leaving it to the authorities to tell them what to do if they are going to rid themselves of all the frustrations and mistakes that unfortunately have already become legion in this field.

Written contribution by Mr. Strother Smith

In reply to both Mr. Bird's and Mr. Studd's criticism of my earlier remarks I would like to stress that I said that more subdivision is possible than they may be prepared to admit. I did not suggest that every factory should be broken up into small compartments regardless

of the nature of the process. Mr. Bird himself has suggested that the hazardous stores can be segregated from the main shop but there are many factories where the whole plant, possibly worth £10 million is exposed to the risk of one fire. Even in flow systems of production there is some break in the continuity of manufacture and there is no reason why some system of separation should not be devised to prevent the passage of flames from one section to another. The processing of many assemblies could be carried out in shops separated from one another and from the main assembly area. The separation does not have to be a brick wall without any opening in it, although there are many factories where processes could all be so separated from the remainder without any loss of production efficiency.

Means of Escape and Internal Access within the Building

Extracts from a paper by Mr. F. W. Delve, C.B.E., M.I.Fire.E., Chief Officer, London Fire Brigade

In buildings where the height of the upper floors is beyond the effective range of modern fire appliances, e.g. 80 ft., means of escape from and access to the various floors is of particular importance to a fire officer, not only because of his responsibility in rescuing persons trapped by fire or smoke, but also on account of the tactics and strategy to be employed in the conduct of fire-fighting operations. . . .

In buildings beyond the range of the Brigade's appliances, both rescue and fire-fighting operations have to be carried out from the staircases. The positioning of staircases is, therefore, a matter of great importance to the fire officer, and the local authority would be wise to ensure that the fire officer is consulted, not necessarily on every building, but certainly in agreeing 'principles' which can be generally applied to very high buildings. Such principles would deal with the number of, and positioning of, the staircases; the lobby approaches thereto; and fire lifts. These matters are extremely important from a public safety point of view as well as for fire-fighting operations. . . .

To the fire officer a cardinal principle is that in the event of fire, wherever it might occur in a building, the occupants should be able to reach safety by running in the opposite direction to the fire and/or smoke. Smoke is mentioned deliberately as experience has shown that this is often the greater danger; relatively few people are burned to death at fires, but many are asphyxiated by smoke. In giving advice, therefore, as to where the staircases should be, the fire officer views the problem from the safety aspect. . . .

In very high buildings, special facilities for conducting fire-fighting operations are essential. In military phraseology the term 'bridge-head' is applied to a place from which operations stem. In fire-fighting in very high buildings there must be a similar place, reasonably safe and well ventilated and situated immediately adjacent to the point of access, e.g. the lift and stairway. In London this takes the form of a ventilated lobby which is a requirement in all 'controlled buildings'. This lobby serves a dual purpose, it provides not only a 'bridge-head' from which fire-fighting operations can commence, and a 'way of retreat' if evacuation becomes necessary; but also additional safety for the occupants in that it prevents smoke from entering the staircase. Here it is appropriate to emphasise that in very high buildings it is essential to secure that when occupants reach the staircase they are safe. In no case should it be possible for smoke to enter a staircase; if it does, then occupants of the floors above may become trapped. . . .

Normally lobby approach staircases should be on an external wall next to a street or open space easily accessible to Brigade appliances. In cases where the ground floor projects beyond the upper storeys, the staircase may be approached on the ground floor through a short enclosed corridor or entrance hall. It is important that staircases should be enclosed by walls having a fire resistance of two to four hours, according to the nature and user of the building, and should provide access to all floors. The only approach to these staircases at all levels should be by means of a ventilated lobby which separates the floor area from the staircase. To achieve separation effectively, the doors between the floor area and the lobby, also between the lobby and the staircase, should be fire-resisting and self-closing. In floors *below ground level** a steel rolling shutter should be fitted to the doorway between the lobby and floor area, in addition to the fire-resisting self-closing doors, and the lobby should be fitted with adequate smoke vents, to discharge smoke preferably direct to the open air, in positions which will not affect the escape of occupants. These smoke vents are usually provided by means of openings above doorways delivering direct to a street. The staircase itself is ventilated by a permanent vent at its head; also an openable window is provided at each floor level. Similarly, each lobby should be fitted with a permanent vent at or near ceiling level, as well as an openable window. These measures, if taken, will ensure that staircases and lobbies are kept free of smoke; and to ensure greater ventilation, if necessary, firemen can open windows on both the staircase and the lobbies.

Adjacent to each lobby approach and staircase a fire lift should be provided. This lift should be of a sufficient capacity to accommodate a minimum of six firemen and their essential equipment. Normally an 'eight-person' lift will meet this requirement. As a safeguard the electric supply to the fire lift should be independent of the circuits supplying the remainder of the building. It would be unreasonable to require that this lift be used by the fire brigade only, although I believe this is done in certain American cities. In London no objection is raised to the use of the lift for ordinary passenger traffic provided that it is fitted with a special switch at ground floor level to enable firemen in an emergency to take control of the lift without interference from the call points on the various floors.

* Our italics

In situ concrete finishes

Report of a discussion held at the R.I.B.A., 16 December 1958 introduced by J. G. Wilson [*F*], W. A. Allen [*A*], in the chair

The purpose of this discussion evening, the first of two such meetings organised by the Science Committee, was to provide a forum for the exchange of 'know-how'. The meeting was open to all members of the building industry, who were invited to bring slides or samples. No verbatim report is being published, and this was made clear at the meeting in order that everyone could express their views more freely. The report given below is a brief record of some of the major subjects discussed. Since discussion evenings, or 'workshop evenings' as they are sometimes called, are a new venture, criticism of the way in which they are managed or reported would be particularly welcomed. It has already been seen that the Henry Jarvis Hall is not entirely suited to this purpose and it has been suggested that the meetings should be for a smaller, invited audience. These ideas will be considered if discussion evenings are developed during the next Session.

Terminology. Mr. Wilson who introduced the discussion, asked the question: how does one define the term 'fair-faced concrete'? He suggested that in brickwork it is understood to mean brickwork not intended to be plastered or rendered, and therefore neatly finished and pointed. If this description is similar for concrete would it mean concrete thoroughly compacted and free of surface blemishes, even though the board marks read as a pattern on the surface of the concrete? Or, would it mean concrete cast against formwork lined with plywood or hardboard and having all imperfections such as honeycombing, air holes, finning, etc., either filled in or ground off and the surface left smooth and clean? This point was taken up during the discussion and the use of two terms was suggested:

exposed-face concrete, concrete direct from the shuttering;

fair-faced concrete, concrete made by grout or finished by rubbing down.

Slides were shown illustrating these definitions and many architects obviously felt that the material should normally be used in the *exposed face* sense, where as Mr. J. Gowan [*A*] put it, 'it is a powerful structural material, rather than to try and make it look like stone or pebble dash or to put polka dots on it which does a disservice to the material.' This was a reference to a remark of Mr. Wilson's three main methods of using 'in situ concrete': (*a*) board mark finishes (*exposed face*), concrete direct from shuttering in which no special linings have been used; (*b*) special formwork lining finishes (*fair face*), where ordinary timber formwork is lined with textured hardboard, rubber matting or patterned thermoplastic sheets; and (*c*) exposed aggregate finishes—of these he said 'the profession is more or less divided on whether an exposed aggregate finish is an acceptable one for concrete. I have no such doubts in my own mind. I find it far more satisfying than

any concrete finish of which the surface is composed of a rich skin of hardened cement paste. I justify my opinion on the grounds that concrete is composed of cement, fine and coarse aggregate, and of these three the ratio of cement to aggregate is normally of the order of 1 : 5 or 1 : 6 and therefore any treatment which reveals the aggregate is a truer expression of the material than cement alone. Further, the removal of the cement skin improves the weathering properties of the surface. Yet another reason for liking an exposed aggregate finish is the possibilities it provides for producing concrete of different colours, depending upon the aggregate used. The cheapest method of producing an exposed aggregate finish is by brushing the surface with stiff bristle or wire brushes immediately the formwork is removed. This treatment is limited to a period of from 16 to 20 hours after placing of the concrete, depending upon the type of cement used and the temperature at the time of placing'.

China clay sand. A greater use of china clay sand was advocated for *exposed-face concrete*, since the mica content gives the concrete a sparkle and it gets whiter as the concrete dries out. It was remarked that china clay sand had been used in the exhibition buildings at Glasgow and for concrete blocks at Croydon Airport.

Staining. The Chairman asked the meeting for comments on staining. Not many people were willing to discuss this aspect; a trade representative suggested that the answer lay in the use of silicone. This was not entirely accepted by the meeting and it was pointed out that the main cause is that one is applying mould oil to a board which varies in rate of absorption, and in the case of hard grain a certain amount of mould oil is left on the surface of the wood where the concrete is placed. The oil stays on the surface and can be detected by means of an ultra-violet lamp. It will fluoresce and one can see what appears to be a dark patch during the day and a light patch at night.

Another problem arises from the fact that one gets a hard surface of calcium carbonate, which is particularly brought about by using one of the impregnated linings, such as impregnated plastic.

A very smooth almost glass-like surface is obtained but it gives a mottled effect. This links up with other types of linings, such as one might use for formwork, where one gets the aggregate which is underneath the skin of the concrete and variations and blemishes.

These two problems can be overcome, but there is some very early work on the use of silicone for the treatment of formwork which does not really cure this appearance. There is a whiteish effect and it tends to encourage efflorescence to appear on the surface. Efflorescence or white deposit does detract from the general appearance, but under reasonable weather it removes itself in time naturally. If one wished to hasten the natural process, one could do so by washing with acid.

It was also pointed out that there is an old recipe for placing concrete in such a way that it is not discoloured if one does not put too much water into the concrete. The reason concrete discolours is that the humidity does not stay on the surface but when it rains it penetrates into the concrete, because there are large hollow spaces where it has dried out. Therefore, one does not put more water into the concrete than the concrete needs to begin with, and it can be exposed to rain and it will not discolour any more than brick or other material. That is, it will discolour but will stop immediately the rain stops.

Shuttering. All the slides used during the evening had shown boards parallel to the reinforcement; an eminent engineer drew attention to the fact that Luigi Nervi always places his boards at right angles whereas when parallel boards are used which are longer it is more difficult to position them correctly. If this is done well in Italy and France can it not be well done in this country? Apparently Nervi uses a variation of boards so that he gets slight variation of colour as with brickwork.

Prices. A local government architect offered some interesting comparisons based on a 9 in. beam under a concrete cross-wall; these were divided into three categories: (1) the casting of concrete with an acceptable finish; (2) the applying of a tooled finish to it; (3) covering it up.

It was pointed out that the figures were a year old. However, a list of about eight or ten figures was given for different finishes, bearing this reservation in mind.

'In the first category, the casting of concrete with a reasonable finish, there was a shutter design arranged to show the grain to its best advantage, at 5*d.* a foot run. This was a figure below which nothing else came. These figures are extra over the normal shuttering.

'Rubber-lining the formwork to produce a rough textured finish was 1*s.* 4*d.*

'On the aggregate transfer shuttering lines with a loose piece of resin-bonded plywood to which it does adhere the figure was 4*s.* 7*d.* extra per foot run. For smooth faced shuttering lined with hardboard or metal the figure was 5*d.*

'The figures for tooled finishes, bush-hammered, with a beam in Cornish granite, were 1*s.* 7*d.*, and with the normal aggregate and bush-hammering 1*s.*

'No figure was obtained for wire brushed concrete with a retarding solution. It was considered that under weather conditions the edge beam changes and a possible finish would be retarding solution and wire brushing, which it was understood comes pretty low, about 1*s.* extra cost.

'On covering up with brick tiles or matching facing, bricks at 300*s.* a thousand are 2*s.* 6*d.* extra. Paint varies between 1*s.* 6*d.*, depending on the cost of the rendering, and 3*s.* 4*d.*, plain-faced is 1*s.* 1*d.* and mineralised 3*s.* 7*d.* There were other figures; quite a variation of asbestos cement, at 1*s.* 10*d.*, 2*s.* 6*d.* and so on. Lastly, precast concrete facing slabs with an exposed aggregate or artificial stone finish cost 5*s.* 9*d.*

'These figures relate to particular jobs and would not apply at all, presumably, to a case where there is a large plane area of concrete like an end wall of a box-frame building.'

Value for money in building

HOW TO GIVE the building client better value for his money was the theme running through the Cost Control Conference, organised by the Cost Research Committee of the Royal Institute of British Architects from 15 to 18 January 1959. The Conference, which was held at Missenden Abbey, Bucks., was intended primarily for architects, who made up more than 60 per cent of the membership of about 60 people; there were also a number of quantity surveyors and representatives of the building contractors and the building client present, to ensure that their points of view were not overlooked.

The aims of the Conference were to bring together both believers and unbelievers in systematic forms of cost control at the design stage of building; to examine the problems and develop solutions that will help to give clients the buildings they want for the money they can afford; and to relate these problems to the broader aspect of improved management of the whole building process.

Professor J. V. CONNOLLY, B.E., F.R.Ae.S., M.I.Prod.E., Director of the Sundridge Park Management Centre, in the opening lecture showed the urgency of the problem in terms of the state of the national economy—the country's dependence for survival on a margin of exports, its failure to maintain its share of world exports despite the rapidly expanding world population and therefore potential markets, the need for greater capital investment to improve productivity. The building industry, he suggested, could make a significant contribution towards reducing the overhead costs of industrial exports by

improving its own efficiency in the provision of factory buildings. This could be done through an improvement in both the quantity and the quality of the resources devoted to management.

Why, after hundreds of years of architecture, should we be only in the formative stages of cost control? Mr. S. A. W. JOHNSON-MARSHALL [*A*], speaking on the role of the architect in cost control, attributed this to the fact that buildings have become larger and more complex and more expensive; and clients have become more exacting. He did not accept the view that cost planning is a harsh and limiting discipline for the architect. It would only be so when the architect did not know how to make use of it; when he did, it removed a major anxiety from his work and helped him to design with confidence.

Mr. J. NISBET, F.R.I.C.S., Chief Quantity Surveyor in the Architects and Building Branch, Ministry of Education, developed some original themes on the role of the quantity surveyor in cost control. He suggested that this extension of the quantity surveyor's services to the architect and the client offered a prospect both frightening and enticing. There was the fear of losing some of his independent status through closer collaboration with the architect to be set against the offer of a new sphere of operations that promised to be more creative and intellectually satisfying.

Two examples of a detailed approach to cost planning and alternative working out of techniques were given by Mr. R. J. WHITLEY [*A*], and Mr. C. M. NOTT, A.R.I.C.S. (Hertforshire County Architect's Department), and by Mr. H. A. J. DARLOW [*F*], and Mr. P. W. GRAFTON, F.R.I.C.S. (in private practice). These gave rise to lively discussion on a wide range of subjects—the application of cost planning to the 'one-off' job as opposed to a series of jobs of the same building type, the need for a central source of cost data, the use of punch cards and electronic calculating equipment for preparing quantities, the cost of cost planning to the architect and the quantity surveyor. There was general agreement that proper cost planning would result in the provision of complete working drawings at the stage when bills of quantities had to be prepared, which would help the builder to plan the job properly and give him greater confidence in the architect (with possibly a consequential effect on the amount of his tender).

The terminology used by the professions was challenged by the builders' representatives, who maintained that what was being discussed was not cost control ('cost' relating strictly to the actual cost of materials and labour used by the builder), but expenditure planning. It was clear that there was a lack of a common understanding of the significance of the various terms used, and the Joint Liaison Committee recently set up between the R.I.B.A. Cost Research Committee and the R.I.C.S. Cost Research Panel were charged with getting a satisfactory terminology worked out.

A paper on cost analysis and its relation to cost planning and cost control techniques was presented by Mr. CYRIL SWEETT, F.R.I.C.S., Chairman of the R.I.C.S. Cost Research Panel, in which he drew attention to the need for some form of standardisation of methods of analysis and for the interchange of information between offices, but was concerned about the possible misuse of a central library of costs by people unskilled in the interpretation of cost information.

The need for the architect to learn the language of the builder and to think at the design stage in terms of the operations in which the building is to be built was urged by Mr. W. J. REINERS, B.Sc., Building Operations Research Unit of the Building Research Station. In a paper on research and cost control, he suggested that the effectiveness of cost control depended largely on the quality of information available on building costs, which was at present seriously affected by residual variations in price. He stressed the importance of improving the channels of communication of the builders' estimator with the architect and the quantity surveyor in defining the work content of the building, and within his own firm, by providing him with accurate data on site costs.

The architect's responsibility for estimating an economic time for the erection of a building and for programming and progressing the contract were given a fresh examination in a paper by Mr. A. W. CLEEVE BARR [*A*], (Architects and Building Branch, Ministry of Education). This set out the essentials for a good architect's brief and showed how the full knowledge of the client's requirements can simplify and avoid changes in work at a later stage.

The suggestion that professional men should devote more time to analysing their communication activity was advanced by Mr. A. C. LEYTON, B.A., Ll.B., Barrister-at-Law, Organiser of Liberal Studies at the Northampton College of Advanced Technology, with illuminating illustrations in actions as well as words. This could help to achieve the synthesis of thought needed by the building industry organised as it is at present in several different camps. This theme was taken up by Mr. E. J. COOK, B.Sc., A.M.I.C.E., M.I.O.B., of Messrs. Richard Costain Ltd., who drew attention to the present splintering of management responsibility at the executive side of the building programme. In a paper on the effect of the design process on the builder at the tender stage and before operations commence, he stressed the importance of pinpointing responsibility at all stages. It was accepted that throughout the design process the architect was the leader and was fully responsible. Once the site work had begun, however, he asked whether the leadership should not then pass to the builder, to take full responsibility for executing the whole project, including all the specialist work involved. Mr. Cook also made a number of challenging comments on the need for greater participation of the architect and the quantity surveyor in the building industry and for improved communications between the client and the architect, with the latter adopting a much firmer attitude towards the client on the planning that had to be done before work starts on the building site.

In his summing up, the Chairman of the Conference, Mr. R. BADEN HELLARD [*A*], (Chairman of the R.I.B.A. Cost Research Committee), suggested that the building industry needed to pay much more regard to the 'high cost of low overheads' than to the operation of Parkinson's law. Planning as represented by the part played by the architect and the quantity surveyor was an overhead to the cost of the finished product, but without planning the costs of the building would certainly be increased. If architects failed to concern themselves more closely with the operational side of the building industry and give leadership in its management, there was a danger that they might lose the opportunity to design altogether—apart from the occasional cathedral or prestige office for a firm of 'all-in' building contractors!

The complete set of papers that were presented to the Conference provide a valuable guide to the present state of thinking on cost control at the design stage, and will serve as a reference book on the subject for sometime to come. Copies will be available shortly for sale (price 25*s*.) from the Secretary, R.I.B.A., 66 Portland Place, London, W.1.

Correspondence

ARCHITECTURE ANONYMOUS

The Editor, R.I.B.A. Journal

Sir,—Dr. Bradbury in his provocative article in the December 1958 issue of the JOURNAL has raised many interesting points for discussion. May I offer the following brief observations.

In all periods it has been possible to find examples of highly individual architecture existing alongside buildings of a more anonymous character. The anonymity of these buildings has detracted neither from their beauty nor function.

Today one may readily quote examples of work that can be instantly recognised as coming from a particular source. Likewise one can illustrate work of no lesser quality whose authorship is not so evident.

The implication of 'Architecture Anonymous' would appear to be that mid-20th-century architecture must necessarily be anonymous and therefore of little interest or value.

This I find alarming in substance and inference.

The social-political-economic movements of the last 60 years have presented architects with problems of greater difficulty, complexity and challenge than ever before.

The solutions to these problems have often changed the whole organisation and technique of architecture as it had been known for so long. The individual archi-

tect became part of the all-embracing group. His methods and materials changed.

Possibly this is the anonymity of which detractors of current work complain; but who believing anonymity an evil could claim a Hertfordshire school was anonymous?

The suggestion that current building technique is responsible for dreary repetitive work is I'm sure an argument that has been produced as long as architects have argued.

There is no such thing as a fundamentally poor building material. There are only bad architects. All materials have their own peculiar uses and inherent aesthetic characteristics.

There is only one truly valid criticism of building technique and that is one of suitability.

It matters little if the signature on a design can be recognised or not.

What matters is: 'Is it good design?'

Yours etc.,

A. RODERICK MALES [*A*]

SALARIES AND RESPONSIBILITIES OF SENIOR ARCHITECTS IN LOCAL GOVERNMENT

Dear Sir,—Referring to your article on page 95 of the January issue of the JOURNAL—I was 23 years in the employ of a local authority: retiring two years ago.

I am astonished to read that the average salary of Senior Architects up to Deputy level is £800–£1,070. These figures divided by three will give readers the value of the salary in terms of pre-war money.

£350 was my commencing salary in 1935 as second in command of a Group. I am not surprised that local authorities suffer from shortage of staff both clerical and technical.

As the Ad Hoc Committee's purpose was to establish how far the salaries earned by Senior Architects corresponded with the responsibilities they held, I would inquire whether their investigations gave any indication as to the value of the building work carried out by any individual officer per annum.

I presume the Committee's function was to determine whether or no these officers were over or under paid.

I consider the investigation hardly worth while if it did not ascertain this information.

Yours faithfully,

H. H. LAWS [*A*]

BUILDING SOCIETIES AND THE DESIGN OF HOUSES

Sir,—Building societies have recently been subject to some criticism from architects and builders on the ground that they are old-fashioned in outlook and over-cautious in lending policy. According to the critics this may have the effect of discouraging new developments in house design. Let us examine the criticism from the building societies' point of view.

Building societies may be considered to be trustees of the savings and investments placed with them by the public and, indeed, when the Government's proposed legislation on house purchase reaches the statute book, deposits with approved societies will be granted trustee status. What is the main function of a trustee? Surely it is to administer the funds at his disposal with complete security; it is just this which the building societies strive to do. They are not conducted for profit; they have no equity shareholders and speculation is no part of their function.

When the manager of a building society contemplates the making of a mortgage loan, he must have in his mind the possibility, albeit remote, of having to dispose of the property in the open market at some future date. As both a matter of law and of prudent practice, he has to rely upon the society's surveyor to advise him on the property's maintainable market value and on how the re-sale price may be affected by any unusual or experimental features of design or construction.

Now architects do frequently seek to create new designs and to import original ideas, but public taste sometimes has a way of lagging behind and it is public taste which largely controls the value of the building society's security. Further, the new features may be more costly than their traditional counterparts and it has to be remembered that the home buying public is becoming increasingly 'price-conscious'.

In general, the duty of the building society is to assist members of the public to buy the houses of their choice; it does not normally include that of influencing them in their choice save where the property is unsound in construction and for that reason, or any other similar reason, one which the borrower should not buy. In short, the lending policy of the building society must proceed at the same pace as public taste and public demand. What are intended by architects to be improvements in design do not necessarily succeed in appealing to the buying public. Before the last war, for example, a good many flat-roofed houses were being built; but the public never really took to them and very few new ones are to be seen today.

It is just this knowledge that new design is partly experimental that makes the building societies cautious. Even so, building societies never stand in the way of good new design provided it has the ready approbation of the public concerned. The Building Societies Association is represented, for instance, on the Central Panels Committee and, in 1956, was prepared to give financial support to a scheme for improving the design of small houses which the R.I.B.A. was then seeking to organise. But it cannot be emphasised too strongly that the first duty of building societies is to afford proper security for the money entrusted to them by over 4,000,000 investors and that for this (and other) reasons they are always more likely to march with the public taste in home design than to attempt to lead it.

Yours faithfully,

ALEXANDER MEIKLE, C.A.,
Chairman of the Council, The Building Societies Association

Practice Notes

Edited by Charles Woodward [*A*]

SEALING OF CONTRACT DOCUMENTS. The Law Reform Committee, on the invitation of the Lord Chancellor, have considered the case of Wright *v.* Romford Borough Council in which it was held that an agreement in writing signed by the Council's engineer and surveyor for demolition work was not binding on the Council because it was not under seal. (1956. *All England Law Reports*, Vol. 3, page 785.)

The Committee were impressed by the demand for the abolition of the formalities at present required for contracts made by incorporated bodies other than companies. The Ministry of Housing and Local Government and the Association of Municipal Corporations gave evidence in favour of the existing law, but the Committee's view is that 'if the practical inconveniences and uncertainties of the present law have not impressed themselves upon the Ministry and the municipal corporations as they have upon the latter's chief administrative officers represented by the Society of Town Clerks, it is, we think, because the law is not in fact observed and the great majority of municipal corporations and those who enter into transactions with them are honest enough, or politic enough, not to rely upon a technicality to escape the consequences of a contract freely entered into. A law which is ignored because it is both uncertain and impracticable and which, if enforced, may lead to inequitable results is a bad law.' (Law Reform Committee, Eighth Report.)

[*Note:* The case above referred to was noted in the JOURNAL for February 1957 at page 155.]

JOINT CONSULTATIVE COMMITTEE OF ARCHITECTS, QUANTITY SURVEYORS AND BUILDERS. Second Invitations to Tender. The following Procedure Note has been issued by the Joint Consultative Committee of Architects, Quantity Surveyors and Builders:

The attention of the Joint Consultative Committee of Architects, Quantity Surveyors and Builders has been drawn to a practice of inviting contractors to tender twice over for the same works upon the same, or slightly modified, Bills of Quantities. This practice takes various forms, one being to send out an inquiry asking for tenders by a certain date, and then, after a period of time, to re-issue amended Bills, asking for further tenders to be submitted.

The Joint Consultative Committee consider that this practice is highly objectionable. The prices originally tendered become generally known, and the second competition is therefore unfair. Where the lowest tender is for a figure higher than the building-owner is prepared to pay, the correct course is for the building-owner to negotiate a price with the lowest tenderer on an amended design and/or specification. (5 January 1959.)

PLANNING PERMISSION CONDITIONS. In 1951 the Ministry of Housing and Local Government issued a Circular to local planning authorities giving advice on the drafting of conditions attached to a planning permission. The Circular stated that 'conditions to be satisfactory must be capable of enforcement; this means not only should they be clear and precise in expression, but that they should be couched in such a form that the Council will be able to take effective action if they are not observed. Vague expressions have obvious weaknesses.'

In a recent case permission was granted to develop land by building a pair of semi-detached cottages, subject to a condition that 'the occupation of the houses shall be limited to persons whose employment or latest employment is or was employment in agriculture as defined by section 119 (1) of the Town and Country Planning Act, 1947; or in forestry, or in an industry mainly dependent upon agriculture and including also the dependants of such persons as aforesaid'.

The Court held that the words 'such conditions as they think fit' in section 14 of the Act of 1947 are such conditions as a local planning authority should think fit to impose, having regard to their statutory duties and to local planning considerations. The categories of permissible occupants prescribed in the condition were wider than those which could properly be related to local planning considerations, so that the condition was *ultra vires* and of no effect. (Fawcett Properties Ltd. *v.* Buckingham County Council, (1958), 1 W.L.R. 1161, Chancery Division.)

[*Note*. Extracts from Circular 58/51 dated 10 September 1951 were published in the JOURNAL for October 1951 at page 480, the title of the Circular being 'The Drafting of Planning Permissions'. It may still be obtained from H.M.S.O. price 4*d*.

The Circular gives clear guidance to local planning authorities and states that 'conditions should not be made subject to qualifications, such as "if called upon to do so" or "if the growth of traffic makes it desirable", which leave the basic question of whether the condition is to apply to be settled at a later date. The extent of what can be required by an enforcement notice is defined by section 23 (2) of the 1947 Act, and it will often be found useful to test the worth of a condition by examining it in the light of this sub-section. Conditions which have no relevance to planning have no place in a planning permission; planning powers ought not to be used as a universal longstop when other powers are not available.']

WAR DAMAGE COMMISSION. Deputy Commissioner. The Commission have appointed Mr. Frank Scarlett, B.A. [*F*] to be a Deputy Commissioner.

LAW CASE. New Streets Act, 1951. Service of Notice. Whitstable Urban District Council *v.* Campbell. In this case building work had been commenced before security for road charges had been made to the District Council. The Council proceeded against the building owner for infringing section 1 (1) of the New Streets Act, 1951, but addressed the notice to her at the office of her architect. The justices dismissed the case holding that the service of the notice under section 2 (1) of the Act was bad. It was contended by the Council before the justices that in accordance with the usual practice the notification had been sent together with the notice under the Building Bylaws and the planning permission to the address from which the plans had been received and that the ensuing correspondence clearly showed that the notice of approval under the Building Bylaws had been received and that the correspondence had acknowledged the existence of the notice under section 2 (1) of the Act.

The Council appealed to Queen's Bench Divisional Court who held that the case should go back to the justices because it was clear from the documents put before the justices that the building-owner had had the notice. It is not to be thought for a notice to be served that it is necessary to have recourse to section 285 of the Public Health Act, 1936, if the person has in fact got the notice and nobody denies that the notice has been delivered to the person who is to be affected by it. The section is only to be called in aid where there is difficulty about it and then it says that service may be made in a variety of different ways. (JOURNAL OF PLANNING AND PROPERTY LAW, January 1959.)

The justices subsequently convicted the building-owner and she was fined £15.

Christmas Holiday Lectures for Boys and Girls

THIS YEAR'S LECTURES given on 31 December 1958 and 2 January 1959 by Mr. Leo M. De Syllas, A.A.Dipl. [*F*], opened appropriately enough to the sound of a record of Mr. Noel Coward's 'Out in the Midday Sun'. Introducing the lecturer, Dr. Otto Koenigsberger, Director of the Department of Tropical Architecture at the A.A. School, told the boys and girls that it was essential that by the time they came to take up a job that they should know something about the different professions between which they could make their choice. Mr. De Syllas certainly gave his young audience of over 200 a very good idea of what an architect had to know and the problems he had to face when designing buildings in the tropics, and although he said at the beginning that he did not like lecturing he did in fact give two very informative talks.

The subject was a good one since it had many points of contact with school subjects and projected them into the real world. Mr. De Syllas gave a true picture of conditions as they exist without any bogus travelogue glamour—'There are millions of people in the tropical belt who live on £6 a year. . . . Here we face the most crucial problem that presents itself to us as architects or civilised northern European people in contact with the tropics. This problem is created every time we do a job. We have to face the fact that, having given them one example, they will want more, and they cannot be kept in their present situation.

'Our job as architects, doctors or teachers is how to give them the best that our civilisation can create while retaining the good qualities of their own civilisation . . . here is a huge element of the human race which is going to move onwards in some form or another to a life which is more comparable with our own. Can we give that life the best that we have or shall we leave it to develop some of the bad elements as well as the best ones? It is an exciting function for any profession working in any of these territories.'

Sixty-two slides were shown of many buildings in the tropical belt from Algeria to Zanzibar, ranging from native hovels to the best modern examples.

Introducing the second lecture, Dr. Koenigsberger told the children something about the way the lecturer's own firm works as an architects' co-partnership.

Mr. De Syllas continued his slides explaining by their means how the sun's heat and the breezes could be controlled scientifically to give comfortable living conditions and how the functional solution of climatic problems could become the inspiration of good design.

He concluded by saying that the important thing to remember about buildings in the tropics was that in general they were not really lived in. In the hot and humid countries particularly, the buildings were much more for purposes of security than for living in. In fact it was true to say that the best place to live was under a large tree. He showed a slide of the Assembly Hall of the new University of Rangoon to illustrate this point. This building takes the form of a structure resembling a great turtle's back made entirely of strips of mahogany glued together—a great timber shell supported on stubby steel columns with a small canopy at the front. It is a complete counterpart of a tree, giving shade and protection from the rain and also clear passage to the breezes.

Afterwards there were quite a number of questions. One child asked how good a mathematician an architect needs to be (a thing we all want to know). Another asked if the Englishman you build for abroad was more conservative or less when it comes to presenting him with new ideas.

Another question was: 'Most of the buildings we have seen have flat faces, and these have been shaded by one means or another. Are there any buildings which have distorted faces to throw shadows across them?' These and many more were patiently answered by Dr. Koenigsberger or Mr. De Syllas, and the meeting closed with loud applause.

R.I.B.A. Prizes and Studentships 1958–1959

R.I.B.A. Intermediate Design Prize: A Certificate and £100 for the Study of Contemporary Architecture in Europe. Subject 'A Small Riding Establishment with Covered School'. Certificate and £50 to Noshirwan Cowasjee [*Student*], 25 Wellington Court, Knightsbridge, London, S.W.1 (School of Architecture, The Polytechnic, Regent Street, London). Certificate and £50 to Hugh Cannings [*Student*], Ulcombe Post Office, near Maidstone, Kent (School of Architecture, Canterbury College of Art).

Victory Scholarship: A Silver Medal and £150 for the Advancement of Architectural Education. Subject 'Pleasure Pavilions in Richmond Park, near London'. Not awarded. Certificates of Honourable Mention to Alexander Sangster [*Student*], 1 Hillside Court, Cholmeley Park, Highgate, London, N.6 (School of Architecture, Dundee College of Art), John Newton [*Student*], 66 Hykeham Road, Lincoln (School of Architecture, Leicester College of Art), and Arthur George Batt [*A*], 15 Ravenscar Road, Downham, Bromley, Kent.

R.I.B.A. Silver Medal for Measured Drawings and £75. Awarded to Norman Foster, 4 Crescent Grove, Levenshulme, Manchester 19 (Manchester University School of Architecture).

R.I.B.A. Silver Medal and £50 for an Essay. Awarded to Maurice Joseph Brown, D.A.(Edin.), A.M.T.P.I. [*A*], 4 Eastville Avenue, London, N.W.11 (School of Architecture, Edinburgh College of Art). Certificate of Honourable Mention to David Selby Martin [*Student*], Barnjet, Stone Gap, Broadstairs, Kent (Manchester University, School of Architecture).

Owen Jones Studentship: A Certificate and £250. For the improvement and cultivation of knowledge of the successful application of colour as a means of architectural expression. Awarded to Gordon Barry Gasson [*Student*], 51 Doveridge Road, Hall Green, Birmingham 28 (Birmingham School of Architecture).

Alfred Bossom Research Fellowships: £250 for Post-Graduate Research. Awarded to Gordon Ellis Michell [*A*], 22 Queensdale Road, London, W.11 (Architectural Association, School of Architecture, London).

R.I.B.A. Rose Shipman Studentship Trust: For the Study of Architecture. Studentship of £600 awarded to Herbert Lawrence Gloag, A.A.Dipl. [*A*], Manor Farm Cottage, School Lane, Welwyn, Herts. (Architectural Association, School of Architecture, London).

Henry Saxon Snell Prize and Theakston Bequest £150. (Offered jointly by the R.I.B.A. and the Architectural Association for the study of the improved design and construction of hospitals, convalescent homes and asylums for the aged and infirm poor). Awarded to William John Jobson [*A*], Taylors Cottage, Little Wittenham, Abingdon, Berks. (R.W.A. School of Architecture, Bristol, and The School of Architecture, The Polytechnic, Regent Street, London).

Hunt Bursary: A Certificate and £95 for the Study of Housing and Town Planning. Not awarded.

Athens and Delissa Joseph Bursaries: £175 for Study at the British School at Athens. Awarded to Gordon Martineau Toplis, D.S.C., B.Arch.(L'pool) [*A*], 9 Langland Gardens, London, N.W.3 (School of Architecture, The Polytechnic, Regent Street, London).

Rome Scholarship in Architecture 1958. £425 per annum for two or three years' study and research at the British School at Rome. Offered by the R.I.B.A. and awarded by the Faculty of Architecture of the British School at Rome. Awarded to Alfred Rigby [*Student*], Accademica Brittanica, Valle Guilia, Roma 51, Italy (Manchester University, School of Architecture).

Neale Bursary: A Certificate and £125: For the Measurement of Old Buildings. Awarded to Raymond Bernard Wood-Jones, B.Arch.(L'pool) [*A*], 15 Orrishmere Road, Cheadle, Cheshire (Liverpool School of Architecture, University of Liverpool).

Arthur Cates Prize: A Certificate and £115. In the current year the prize was offered for the promotion of architecture, more especially in relation to the application of geometry to vaulting, stability of edifice and design, coupled with actual measurement and delineation both geometrical and pictorial, of appropriate examples in Great Britain or foreign countries. Not awarded.

Ashpitel Prize 1958 and Sir Banister Fletcher Prize 1958. Awards to be announced later.

R.I.B.A. Certificates of Merit for Students of Schools of Architecture Recognised for Exemption from the Intermediate Examination. Certificates of Merit awarded to William Evans, 15 Ayre Road, Erdington, Birmingham 24 (Birmingham School of Architecture), Dafydd Iago Jones-Evans, c/o Students Club, Welsh School of Architecture, Cathays Park, Cardiff (Welsh School of Architecture, College of Advanced Technology, Cardiff), Kenneth James Ludovic Lochhead, School of Architecture, Edinburgh College of Art, Lauriston Place, Edinburgh 3 (School of Architecture, Edinburgh College of Art), John George Pickles, School of Architecture, University of Liverpool, 26 Abercromby Square, Liverpool 7 (Liverpool School of Architecture, University of Liverpool) and Peter Spring [*Student*], 15 Repton Road, Westbridge, Nottingham (The Nottingham School of Architecture).

R.I.B.A. Certificates of Merit for Students of Schools of Architecture Recognised for Exemption from the Final Examination. Certificates of Merit awarded to James Alexander Gray [*Student*], The Elms, Callander, Perthshire (School of Architecture, Edinburgh College of Art), William Bernard Palmer [*Student*], 8 Heol Llanishen Fach, Rhiwbina, Cardiff (Welsh School of Architecture, College of Advanced Technology, Cardiff) and Edward Lowe Preston [*Student*], College of Architecture, Cornell University, Ithaca, New York, U.S.A. (Birmingham School of Architecture).

Archibald Dawnay Scholarship Trust Prizes 1958. Three Prizes of £100 each for the Advanced Study of Construction. Awarded to George Alexander Stenhouse, 4 Heriot Gardens, Burntisland, Fife (School of Architecture, Edinburgh College of Art), Colin Hogg Stewart, 31 Hawthornbank Road, Haddington, East Lothian (School of Architecture, Edinburgh College of Art), and Christopher Robert Musson, 13 Archer Road, Penarth, Glamorgan (Welsh School of Architecture, College of Advanced Technology, Cardiff).

R.I.B.A. Anderson and Webb Scholarship at the School of Architecture, Cambridge University: A Certificate and £70: 1958. Awarded to Christopher Robert Edmonds, 9 Goldring Road, Cambridge.

R.I.B.A. Henry Jarvis Studentship at the School of Architecture, The Architectural Association 1958, £50. Awarded to John Bartlett [*Student*], 10a Beaconsfield Road, Clacton-on-Sea, Essex.

R.I.B.A. Howard Colls Travelling Studentship at the School of Architecture, The Architectural Association 1958, £40. Awarded to David Robert Pearce, 42 The Drive, Harrow, Middlesex.

R.I.B.A. Donaldson Medal at the Bartlett School of Architecture, University of London 1958. Awarded to Trevor Laurence Conquest Freeman [*Student*], Beggars Roost, Clamp Hill, Stanmore, Middlesex.

R.I.B.A. Prize for Art Schools and Technical Institutions with Facilities for the Instruction of Intending Architects (£10 in Books) 1958. Awarded to Alec Maund, 37 Earle Road, Bramhall, Stockport, Cheshire (School of Architecture, Regional College of Art, Manchester).

R.I.B.A. Prizes for Public and Secondary Schools. These prizes are of a total value of 20 guineas. Not awarded.

London Association of Master Stonemasons Prize: A Certificate and £50, for the Study of Natural Stonework. Prize of £10 10*s*. to John C. Knowles, 70 Imperial Road, Beeston, Nottingham (The Nottingham School of Architecture). Prize of £10 10*s*. to J. Martin Mainprize, 10 Prince Henry Road, Otley, Yorkshire (Leeds School of Architecture and Town Planning).

Notes and Notices

NOTICES

Fifth General Meeting, Tuesday 17 February 1959 at 6 p.m. The Fifth General Meeting of the Session 1958–1959 will be held on Tuesday 17 February 1959 for the following purposes:

To read the Minutes of the Fourth General Meeting held on Tuesday 3 February 1959; formally to admit new members attending for the first time since their election.

Mr. N. Keith Scott, M.A., B.Arch., Dip.C.D. (L'pool), A.M.T.P.I. [*A*], to read a paper on 'An Architect Looks at America'.

(Light refreshments will be provided before the meeting.)

Sixth General Meeting, 10 March 1959 at 6 p.m. The Sixth General Meeting of the Session 1958–1959 will be held on Tuesday 10 March 1959 for the following purposes:

To read the Minutes of the Fifth General Meeting held on Tuesday 17 February 1959; formally to admit new members attending for the first time since their election.

Mr. John Charlton, M.A., F.S.A., to read a paper on 'Royal Palaces in England from Norman to Victorian Times'.

(Light refreshments will be provided before the meeting.)

Session 1958–1959. Minutes III. At the Third General Meeting of the Session 1958–1959 held on Tuesday 6 January 1959 at 6 p.m.

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., President, in the chair.

The meeting was attended by about 450 members and guests.

The Minutes of the Second General Meeting held on 9 December 1958 were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President: *As Fellows:* R. J. Double, A. J. Power. *As Associates:* G. M. T. G. Simpson, I. T. Waters, Francis Weal.

The Secretary read the Deed of Award of Prizes and Studentships made by the Council under the Common Seal.

The proceedings closed at 6.15 p.m.

Session 1958–1959. Minutes IV. At a Special General Meeting held on Tuesday 6 January 1959 at the conclusion of the Third General Meeting of the Session 1958–1959 held at 6 p.m. that day.

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., President, in the chair.

The President explained that this Special General Meeting had been called for the purpose of considering the Interim Provisional Report of the Constitutional Committee and receiving the Council's report on the financial situation.

Mr. E. D. Jefferiss Mathews, O.B.E., A.R.I.C.S., the Hon. Treasurer, summarised briefly the Financial Statement, which was published in the January 1959 issue of the JOURNAL, and answered questions put by members.

Mr. A. W. Cleeve Barr [*A*], the Chairman of the Constitutional Committee, then presented the Interim Provisional Report of the Constitutional Committee, which was published in the December 1958 issue of the JOURNAL, and the views of the members were received and their questions answered.

The proceedings closed at 8.55 p.m.

British Architects' Conference, Cardiff, 10–13 June 1959. The British Architects' Conference in 1959 will be held at Cardiff from 10 to 13 June, at the invitation of the South Wales Institute of Architects. Full details of the programme will be published in due course. Particulars of accommodation in hotels is given below.

Formal Admission of New Members at General Meetings. New members will be asked to notify the Secretary, R.I.B.A., beforehand of the date of the General Meeting at which they desire to be introduced and a printed postcard will be sent to each newly elected member for this purpose. On arrival at the R.I.B.A. on the evening of the General Meeting new members must notify the office of their presence and will then take their places in the seats specially numbered and reserved for their use. On being asked to present themselves for formal admission, the new members will file out in turn into the left-hand aisle and after shaking hands with the President (or Chairman) will return to their seats by way of the centre aisle.

Formal admission will take place at all the Ordinary General Meetings of the Session, with the exception of that to be held on 26 May 1959, Presentation of Royal Gold Medal.

BRITISH ARCHITECTS' CONFERENCE, CARDIFF, 10–13 June 1959

The Conference Committee have made provisional reservation of accommodation at the following hotels for members attending the Conference. *Early application must be made to the hotels, mentioning the British Architects' Conference*, as they will not guarantee to reserve the accommodation later than the end of March.

Hotel	*A.A. Category*	*Rooms*		*Approx. Charges Bed and Breakfast*	*Distance from the City Hall*
		Double	*Single*		
Cardiff					
Angel Hotel, Westgate Street	4 Star	20(T)	10	32/6 to 40/– + 10%	700 yards
(U) Central Hotel, near General Station	—	18(T)	23	22/6	1,150 yards
Grand Hotel, Westgate Street	2 Star	13(T)	5	27/6 to 30/– + 10%	900 yards
* Park Hotel, Park Place	4 Star	26(T)	38	33/– to 45/– + 10%	400 yards
* Queens Hotel, St. Mary Street	3 Star	20(T)	5	28/6 + 10%	850 yards
Royal Hotel, St. Mary Street	4 Star	20(T)	10	32/6 to 40/– + 10%	1,000 yards
(U) The Llandaff Hotel, Llandaff	2 Star	7(T)	8	26/6	2 miles
Newport					
* Kings Head Hotel, High Street	3 Star	4(T)	—	27/6	12 miles
* Queens Hotel, Bridge Street	3 Star	8(T)	20	30/–	12 miles
Westgate Hotel, Commercial Street	3 Star	10	—	27/6	12 miles
Penarth					
* Esplanade Hotel	—	6	6	25/–	5 miles
St. Mellons					
* St. Mellons County Club	—	8(T)	2	40/– + 5/– membership fee	6 miles
Pontypridd					
* New Inn, Taff Street	3 Star	10(T)	—	25/– + 10%	12 miles
Bridgend					
* Wyndham Hotel, Dunraven Place	2 Star	4(T)	4	25/–	19 miles
Porthcawl					
* Seabank Hotel, The Promenade	4 Star	15(T)	12	32/6 to 42/6	26 miles
* Esplanade Hotel, Esplanade	3 Star	10(T)	8	27/6 to 30/6 + 10%	26 miles

The names of the following hotels have also been given by the local Committee.

Cardiff: Alexandra Hotel, Queens Street; Bristol Hotel, Penarth Road; Philharmonic Hotel, St. Mary Street; Sandringham Hotel, St. Mary Street; (U) Beverley Private Hotel, 75 Cathedral Road; (U) The Cedars, Fidlas Road, Llanishen; (U) Glenmore Private Hotel, 150–154 Newport Road; (U) Holmesdale Guest House, Newport Road; (U) International House, 45–47 Charles Street; (U) Linden Court, 191 Newport Road; (U) Penylan Hotel, Penylan Road; (U) Sunbury Private Hotel, 124 Newport Road. *Newport* (12 miles); Tredegar Arms Hotel, Station Approach; (U) Stow Park Hotel, Stow Hill, *Caerphilly* (7 miles): Clive Arms Hotel. *Barry* (8 miles): Barry Hotel, Broad Street; Ship Hotel, Harbour Road; The Marine Hotel, Barry Island; (U) The Knap Hotel, Lakeside; (U) Mountsorrel Private Hotel. *Cowbridge* (13 miles): Bear Hotel, High Street. *Bridgend* (19 miles): Dunraven Arms, Wyndham Street; York Hotel, Wyndham Street. *Porthcawl* (30 miles): Porthcawl Hotel; Pier Hotel, Esplanade; (U) Atlantic Hotel, West Drive; (U) Brentwood Hotel, 41 Mary Street; (U) Fairways Hotel, West Drive; (U) Sandville Hotel, Mary Street; (U) Westwood Ho Hotel, Esplanade.

Hotels marked (U) are unlicensed.
Hotels marked (T) have some twin-bedded rooms.
Hotels marked * have garage accommodation or private parking.
Public car parks are available near to hotels generally, and most hotels can arrange garage facilities if requested.

Annual Subscriptions and Contributions. Members' subscriptions and Students' contributions for 1959 became due on 1 January.

	£	s.	d.
Fellows	12	12	0
Associates	7	17	6
Licentiates	7	17	6
Students	2	2	0

For members resident in the trans-oceanic Dominions who are members of Allied Societies in those Dominions, and for members resident overseas in areas where no Allied Society is available, the amounts are as follows:

	£	s.	d.
Fellows	7	17	6
Associates	5	15	6
Licentiates	5	15	6

Cessation of Membership. Under the provisions of Bye-law 21 the following have ceased to be members of the Royal Institute: *as Fellow:* Charles Willie Blanshard Bolton; *as Associates:* Elwyn Leighton Black, John Francis Calbreath Burdis, Frederick Edward Fitzpatrick, Patricia Elizabeth King, Eleanor Margaret McArevey, Herbert Victor Maddox, Maurice Cecil Edwin Norton, Ann Phyllis Schuurmans-Stekhoven, Catherine Elizabeth Scott; *as Licentiate:* John Duncan Allan.

The R.I.B.A. Appointments Department. Members and Students of the R.I.B.A. and the Allied Societies are reminded that the services of the Institute's Appointments Department are available to employers requiring assistants and to assistants seeking salaried employment.

Employers are invited to notify the Secretary of vacancies in their offices, giving details of the work to be done, the qualifications required and salaries offered.

Assistants should preferably call at the offices of the Appointments Department, but if this is not practicable they should obtain from the Secretary an application form, which when completed and returned to the Institute will enable the Department either to send the applicants particulars of vacancies suitable to their qualifications and requirements or submit their names for vacant posts.

Members and Students seeking official appointments should note that normally these are fully advertised in the weekly professional press, and that therefore the Appointments Department do not as a rule notify them to those on the register.

The Institute will also be glad to advise on most matters concerning architectural employment, including overseas appointments.

BOARD OF ARCHITECTURAL EDUCATION

R.I.B.A. Intermediate Examination, November 1958. The R.I.B.A. Intermediate Examination was held in London, Plymouth, Manchester, Leeds, Newcastle upon Tyne, Edinburgh and Belfast from 7 to 13 November 1958.

Of the 400 candidates examined, 119 passed and 281 were relegated.

The successful candidates are as follows:—

Abbott: P. A.
Ames: A. P.
Amey: J. R. D.
Angus: J. S.
Archer: M. L.
Ash: D. W.
Auld: R. H.
Barry: J. E.
Bartlett: D. V.
Bartlett: J. L. M.
Bell: J. K.
Boyack: J. E.
Breunig: C. J.
Brock: J. C. D.
Bubb: B. G.
Buckett: B. J. V.
Caddick: D. J.
Cale: E. T.
Carr: C. J.
Carson: Miss B. R.
Catlow: J. S.
Chowdhury: M. A.
Clark: G. W.
Clarke: W. D.
Claytor: R. C.
Davies: Robert
Day: R. H.
Dent: R. J.
Devlin: C. T. A. J.
Dobson: Alan
Fairburn: Keith
Ferguson: R. J.
Finnigan: P. A.
Foyster: R. W.
Gammie: R. C.
Gardner: J. P. W.
Ghaidan: V. I.
Goodwright: A. R.
Grand: Reuben
Green: J. J. A.
Hajifanis: George
Hardman: William
Harper: F. J. G.
Hastings-Hodgkins: W. P.
Hazzledine: Bill
Heath: R. S.
Hennessy: J. A. P.
Horsfall: J. S. J.
Houghton: F. P.
Ingham: Jack
Jackson: John
Jefferson: Peter
John: G. M.
Jones: M. B.
Jones: P. A.
Jones: Roger M.
Kerr: W. A.
Laughlin: R. W.
Lawrence: T. A.
Lee: J. M.
Leggett: J. A.
McArthur: D. H.
Mallalieu: A. A.
Miles: Alan
Miller: A. H.
Morse: M. G.
Neville: Graham
Norford: B. S.
Noyes-Lewis: P. D.
Park: J. F.
Parker: R. W.
Pavett: Digby
Penny: R. W. G.
Perrins: A. W.
Platt: Donald
Potter: A. W.
Reynolds: Michael
Rice: P. J.
Riches: Miss M. R.
Ritson: Donald
Roberts: E. P.
Robertson: N. E.
Rose: K. A.
Rousseau: V. P.
Roweth: J. B.
Rowley: M. L.
Scholfield: A. W.
Sharpe: J. E.
Shore: Barrie
Sloan: W. B.
Smith: Anthony G.
Smith: Glyn T.
Sockett: M. C.
Starkey: Donald
Stern: R. W.
Stratton: M. J. N.
Sykes: Colin
Taylor: D. A.
Thomas: G. K.
Thomas: M. G.
Thomas: R. G.
Thorne: Miss B. C.
Thorpe: B. G.
Tickell: Alan
Tompkins: B. E.
Toseland: A. J.
Tranter: G. E.
Trickett: T. W.
Tucker: B. C.
Wakeham: M. G.
Watson: A. H.
Waugh: W. H.
Weller: R. W.
Wilson: J. S.
Wood: Arthur
Wood: R. K.
Woods: G. B.
Worth: D. J.
Yeadon: Derek

R.I.B.A. Final Examination.—Revised Syllabus to Come into Effect on 1 November 1962. In view of the impending changes in the Final Examination Testimonies of Study regulations the Problems in Design Nos. F 29 (1A)–F 40 (1D) will remain valid until 30 *September* 1962.

COMPETITIONS

The National Gallery Site. The SUNDAY TIMES offers prizes to a total of £5,000 for designs for the development of the island site, facing Trafalgar Square to the south, on which the National Gallery and the National Portrait Gallery stand, including the vacant area known as the Hampton site, which was recently acquired by the Government for an eventual extension of the National Gallery.

The competition is open to architects of the Commonwealth and registered Students of the R.I.B.A. in Great Britain. Architects in Great Britain *must* be registered under the Architects Registration Acts of the United Kingdom; architects in the Commonwealth *must* be members (not Students or Probationers) of the R.I.B.A.

The competition is for a solution to a programme of requirements and will not seek to produce a commission for an actual building.

Assessors: Professor Sir William Holford, M.T.P.I. [*F*], Mr. William Allen [*A*], Mr. Peter Chamberlin [*F*].

The assessors will award the first prize of £2,500 and will be free to allot an equal sum as they think best among the authors of the designs they place next in order of merit.

Last day for submitting designs: 8 May 1959.

Application for the conditions must be made to: National Gallery Competition, The SUNDAY TIMES, Kemsley House, London, W.C.1, before *Monday, 6 April.*

Roads Campaign Council Competition. Last date for submitting designs in the preliminary stage: 30 April 1959.

Full particulars were published in the JOURNAL for December 1958, page 66.

Design of Ceramic Sanitary Ware. The date for applying for conditions with forms of registration has been extended to 9 *March* 1959, and the last date for submitting designs in the first stage has been extended to *noon on* 2 *May* 1959.

Full particulars were published in the JOURNAL for December 1958, page 66.

Stand for the Carter Group of Companies at the 1959 Building Exhibition. Last date for submitting designs: noon on 10 February 1959.

Full particulars were published in the JOURNAL for November 1958, page 31.

COMPETITION RESULTS

New Technical College, Glasgow

1. Messrs. Boissevain and Osmond [*A*].
2. Messrs. Alison and Hutchison [*F*] and Partners [*AA*].
3. Mervyn Handley.

Commended: J. W. Davidson [*A*], F. Lloyd Roche [*A*] and B. J. Seaman [*A*]; Barrie Dewhurst [*A*]; D. Dex Harrison, A.M.T.P.I. [*F*].

Wokingham County Infants' School

1. Messrs. Wells and Hickman [*AA*] (E. H. Hartry [*A*], Partner in charge).
2. Alan Goodman, Dip.Arch.(Nott'm) [*A*].
3. Kenneth Tasker, M.C.D., B.Arch.(L'pool) [*A*].

ALLIED SOCIETIES

Changes of Officers and Addresses

West Yorkshire Society of Architects. Halifax Branch. Chairman, Cyril Sunderland, B.E.M. [*F*]. Hon. Secretary, Philip Kershaw [*A*], 6 Whinney Field, Huddersfield Road, Halifax. *Harrogate Branch.* Hon. Secretary, Hugh N. Cameron [*A*], The School House, Farnley, Otley, Yorkshire.

Royal Australian Institute of Architects. New South Wales Chapter. President, Max Ernest Collard. Hon. Secretary, Robert Geoffrey Maclurcan [*A*]. Secretary, R. S. Greig, London Assurance House, 16–20 Bridge Street, Sydney, N.S.W., Australia. *Western Australian Chapter.* President, Desmond O. Sands, D.S.O., D.F.C. [*A*]. Hon. Secretary, Kenneth Broadhurst [*A*], 135 St. George's Terrace, Perth, Western Australia. Secretary, E. G. Sier, 2nd Floor, 96 St. George's Terrace, Perth, Western Australia.

Sheffield, South Yorkshire and District Society of Architects and Surveyors. R.I.B.A. Architecture Bronze Medal. Nomination forms in respect of the above award for buildings erected and completed during the three years ended 31 December 1958 within the area of the Society, are obtainable from the Hon. Secretary, Mr. G. R. Adams [*A*], 17 Broomgrove Road, Sheffield, 10. Nominations should be submitted not later than 14 February 1959.

GENERAL NOTES

The School of Architecture, Cambridge University. As a result of a gift to the University, a fund (to be known as the Brancusi Travel Fund) has been established to enable young graduates of the School of Architecture to visit the United States.

A tender has been accepted for a new building which forms an extension to the School of Architecture. This building is the first 'live' building project to be carried out by the School. Students have taken part in the preparation of drawings under the supervision of two members of staff, Mr. A. C. Hardy and Mr. Colin St. John Wilson, who are responsible for the building. The new extension is linked to the main building and provides staff rooms and a staff common room at ground floor level and a new lecture room and a criticism room over. These rooms, at first floor level, can be rearranged to form an exhibition area. Experiments are being carried out in the construction of external walling, heating and ventilation, and the control of natural lighting. The work will be in progress during next year and will be related to lecture subjects.

Mr. Colin Rowe, M.A. [*A*], has been appointed an Assistant Lecturer in the School of Architecture.

A D.S.I.R. Studentship has been awarded for post-graduate work in the School of Architecture. The subject of study is to be related to the research into various aspects of urban development, which is now being carried out by post-graduate students.

Truscon Travelling Scholarship. Truscon Ltd. is offering a Travelling Scholarship of £125 again this year to enable an Associate of the R.I.B.A. to undertake a continental tour of about three weeks' duration. The winner will be accompanied by a member of the company's technical staff awarded a similar scholarship and they will jointly study reinforced concrete work on the continent of Europe with particular reference to the collaboration between architect and engineer. A joint report will be prepared, the use and copyright of which will remain at the disposal of the company.

Applicants must be under 35 on 3 April 1959. No form of entry is required but applications should systematically cover the following particulars: (*a*) Age. (*b*) Architectural education and any distinctions. (*c*) Present employment and general practical experience. (*d*) Evidence of special interest in the use of reinforced concrete in contemporary architecture. (*e*) Languages spoken and previous travel abroad. (*f*) The names of two referees.

The Selection Committee will prepare a short list based on written applications and will interview candidates on this list.

Applications should be received by the Secretary, Truscon Ltd., 35–41 Lower Marsh, London, S.E.1, by 3 April 1959.

Appointments to the Historic Buildings Councils. The Minister of Works, the Rt. Hon. Hugh Molson, M.P., has appointed Miss D. M. Hakim to be Secretary of the Historic Buildings Council for England, and Mr. A. K. Mason to be Secretary of the Historic Buildings Council for Wales. Both posts were previously held by Mr. N. Digney.

University of Adelaide. The University of Adelaide, South Australia, has recently initiated a new Faculty of Architecture and Town Planning under Professor R. A. Jensen [*F*]. The new full-time five-year course in architecture leading to the ordinary and honours degree of Bachelor of Architecture was introduced by the University in 1957. In addition a degree of Master of Architecture is now also available for research into suitable architectural and town planning topics or for one year's further full-time course.

Building Centre Recorded Technical Talks. The Council of the Building Centre have arranged a service of recorded talks on technical subjects, accompanied by film strips, which can be borrowed without charge by R.I.B.A. Allied Societies and Schools of Architecture.

At present there are two talks, but others are in preparation. Recorded Talk No. 1 is '*Curtain Walling*' by Mr. W. A. Allen [*A*], Superintending Architect, the Building Research Station, and Mr. Edward D. Mills [*F*]. This will be available shortly. Recorded Talk No. 2 is '*Coventry Cathedral*' by Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A. President. This talk can be borrowed now. Each talk runs for 45 minutes and several copies are available. The recordings are on 12 in. double-sided, long-playing records.

Societies and schools borrowing talks must provide themselves with a 35 mm. filmstrip projector and screen and either a three-speed record player or a radiogram with a long-playing microgroove stylus. A synchronised apparatus is not necessary.

Applications to borrow a talk should be addressed to the Director of the Building Centre, Store Street, London, W.C.1, stating the date of the meeting at which the talk is to be given. The record and filmstrip, together with full directions, will be sent in a special container a day or two before the meeting.

Notes from the Minutes of the Council

MEETING HELD ON 6 JANUARY 1959

New Year Honours. The congratulations of the Council were sent to the members and others on whom H.M. the Queen had conferred honours in the New Year list.

Appointment of R.I.B.A. Representatives

(*a*) *Kumasi College of Technology, Ghana: Opening of First Permanent Hall of Residence by the Prime Minister, Dr. Kwame Nkrumah,* 28 *February* 1959. Anthony Chitty [*F*].

(*b*) *Preparatory Committee for Seminar on Social Aspects of Housing, Geneva,* 15 *and* 16 *January* 1959. P. E. A. Johnson-Marshall [*A*], representative of the United Kingdom.

(*c*) *R.I.B.A. Architecture Bronze Medal: Nottingham, Derby and Lincoln Society of Architects: Jury to consider Award for Three-year Period ending* 31 *December* 1958. Peter B. Dunham [*F*].

(*d*) *Board of Architects, Federation of Malaya.* W. C. Chen [*A*] nominated in place of V. S. van Langenberg [*L*] for three-year term of office from 1 January 1959.

(*e*) *B.S.I. Committee CP*/111 (1948): *Structural Recommendations for Load-bearing Walls.* H. H. Clark [*F*].

Christmas Holiday Lectures for Young People. The President referred to the Christmas Holiday Lectures given by Mr. Leo M. De Syllas [*F*] which had been attended by large audiences of young people who had shown their keen interest. On his proposition, a hearty vote of thanks was passed in favour of Mr. De Syllas.

Membership. The following members were elected: as Fellows 11; as Associates 35.

Students. 120 Probationers were elected as Students.

Applications for Election. Applications for election were approved as follows: *Election* 10 *March* 1959: as Fellows 9; as Associates 46. *Election* 5 *May* 1959 (*Overseas Candidates*): as Fellows 3; as Associates 8.

Applications for Reinstatement. The following applications were approved: as Associates: Arthur Brooks, Henry Arthur Scarth, John William Wilmot.

Resignations. The following resignations were accepted with regret: Wilfrid Edgar Edleston [*F*], Frank Wood [*F*], Robert Ingham Atkinson [*A*], David William Bishop [*A*], Charles Alfred Broadhead [*A*], Mrs. Patricia Butler [*A*], Hubert Rowland Caddy [*A*], Peter Cranch Downie [*A*], Anthony Greville Drew [*A*], Miss Norah Dunphy [*A*], Mrs. Anne Winifred Robertson Edgerley [*A*], Dudley Graham Evershed [*A*], Mrs. Rosalind Joyce Fleck [*A*], Charles Black Gordon [*A*], Mrs. Ruth Ibbetson [*A*], Mrs. Sheila Ingelbrecht [*A*], Cuthbert Montague George Keeping [*A*], Ernest Korner [*A*], Edward Weldon Marshall [*A*], Mrs. Janet Josephine Miller [*A*], Mrs. Patricia Pardoe [*A*], Mrs. Rosemary Anne Price [*A*], Mrs. Elsa Scott [*A*], Mrs. Dorothy Joan Thompson [*A*], Richard Norman Ward [*A*], Peter John Watson [*A*], James Ralph Wraight [*A*], Donald Alexandre [*L*], Ernest Ashworth [*L*], Alfred Willoughby Hope Brown [*L*], Cyril Camish [*L*], Arthur Wheeler Congdon [*L*], Merwanji Framji [*L*], William John Llewellyn Horsman [*L*], George Melbourne Mayhew [*L*], Vivian Sidney Wade Williams [*L*], Norman Wright [*L*].

Applications for Transfer to Retired Members' Class under Bye-law 15. The following applications were approved: as Retired Fellows: Alexander Cosmo Smith Auld, Clifford Wigg Craske, Alfred Walter Hodges, Thomas Henry Longstaff, James McLachlan, Ernest Josiah Edwards Moore, Charles Holland Rose, Lieut.-Colonel Vivian Home Seymer, Charles William Ward Thompson, George Vey, Herbert McGregor Wood. As Retired Associates: Alexander Adam, Henry George Blizzard, John Oscar Cheadle, Carilef Miles Cooper, William Arthur Golding, George Hanson, Frank Chambers Harris, Herbert Arthur John Lamb, Wallace George Lofthouse, Thomas Stott. As Retired Licentiates: William Atkinson, Thomas Edward Bell, Arthur Edwin Chapman, Arthur Edward Pierce Daniels, Hampton Gardner, George Gibson, William Pearson Holgreaves, Arthur Barnes Johnson, Douglas Edward George Morris, John Pickles, Albert Edward Russell, James Corden Stevenson, Ernest Albert Streatfield, Ernest Frank Tulley.

Obituary. The Secretary reported with regret the death of the following members: Sir John Collings Squire [*Hon. A*], Leslie Barefoot, G.C. [*A*], Percy Vivian Burnett [*F*], John Drummond Macpherson Moore [*F*], John Stuart Syme, F.S.A. [*F*], Arthur Fred Collins Bentley [*Retd. F*], Walter John Dacombe [*L*], Stanley Evelyn Rodger [*L*], Rolf Holroyd Rothwell [*L*], Victor Harry Grist [*Retd. L*].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

Manufacturers' Trade and Technical Literature Competition, 1958. Results:

Certificates of Exceptional Merit. Class I. No award. Class II. Lead Development Association.

Certificates of Merit. Class I. Bartrev Board Co. Ltd., British Werno Ltd., Dryad Metal Works Ltd., Falk Stadelmann & Co. Ltd., Ferodo Ltd., Gyproc Products Ltd., Holoplast Ltd., Jones & Attwood Ltd., Limestone & Green Slate Slab Co. (Westmorland) Ltd., Redland Tiles Ltd., Troughton & Young (Lighting) Ltd. Class II. Floor Quarry Association.

Honourable Mentions. D. Anderson & Son Ltd., Concrete Ltd., Key Engineering Co. Ltd., Magpie Furniture Ltd., Wm. Mallinson & Sons Ltd., Marley Concrete Ltd., Micanite & Insulators Ltd., Permanite Ltd., Treetex Acoustics Ltd., Twyfords Ltd., Wheatley & Co. Ltd.

Commended. Entries from the following firms did not conform with the provisions of British Standard 1311: 1955 as to size, but were otherwise commended by the Assessors. Allied Ironfounders Ltd., Crane Ltd., Formica Ltd.

Obituaries

Sir Richard John Allison, C.V.O., C.B.E. [*Retd. F*] died on 28 September 1958, aged 89.

Sir Richard was educated at a choir school and studied art at the Lambeth School of Art. He entered H.M. Office of Works in 1889 where he was employed on the temporary staff for twelve years. In 1901 he was appointed Assistant Architect, Architect in 1911, Principal Architect on the retirement of Sir Henry Tanner [*F*] in 1914 and Chief Architect on the formation of the Directorate of Works in 1920. He retired in 1934.

Before the First World War he was closely associated with Sir Aston Webb [*F*] in carrying out the work on the memorial to Queen Victoria in front of Buckingham Palace, the redesigning of The Mall as an approach to it and the triumphal arch at the Charing Cross end of The Mall, which materialised as Admiralty Arch. Later he was put in charge of the scheme which included the present Office of Works and other buildings in Whitehall. For three years Sir Richard served as 'diplomatic architect' and travelled about Europe designing legations and embassies, as at Stockholm and Cetinje, in Montenegro. He also rebuilt the Tokyo Embassy after the earthquake.

During the First World War he was chiefly engaged on hospitals, including the hospital built in Richmond Park by the British Red Cross for wounded Americans, which was demolished after the Armistice. The New Science Museum, South Kensington, the King Edward Building of the General Post Office, and Cornwall House, Waterloo Road, are most representative of Sir Richard's work. He was also responsible for the stone restoration of the Houses of Parliament; and he designed many post offices, telephone exchanges and employment exchanges up and down the country.

Sir Richard played an active part in the early days of registration, being one of the nine members of a preparatory Committee appointed by the Home Secretary under the 1931 Registration Act, and he was a member of the Architects Registration Council from its inception in March 1932 until March 1935, sitting as the representative of the Commissioners of Works.

Although he had retired four years before the 1938 Act came into force, Sir Richard continued to take a keen interest in the profession, and was the only architect member of the Appeals Tribunal which was set up under that Act for the purpose of hearing from those whose applications for registration had been rejected. The Tribunal met at regular intervals from 1941 until 1948, and during that period Sir Richard did not miss a single meeting, and his knowledge and advice on all matters affecting the profession were of the greatest value to the other lay members of the Tribunal.

Sydney Maurice Ralph, A.R.I.C.S. [*L*] died on 20 April 1958, aged 62.

Mr. F. Reginald Steele, F.R.I.C.S., M.T.P.I. [*F*], County Architect of West Sussex writes:

'Mr. Ralph was first appointed with the West Sussex County Council in 1920, leaving in 1922 to take up another appointment with the Portsmouth Corporation. In 1925 he was, however, reappointed to the staff of the County Architect of West Sussex at that time, his designation being "First Assistant".

'During the early part of his service with this Authority, Mr. Ralph was engaged on matters of architectural design and construction, working as an architectural assistant on a number of schools. He was Assistant in Charge of the Horsham Clarence Road County Infants' School. But from about the date of appointment of my predecessor, Mr. C. G. Stillman [*F*] in 1932 he assumed the duties and title of "Chief Maintenance Officer", when he became responsible for the maintenance of all county buildings.

'An important part of his career came, however, during a period of approximately 12 months immediately prior to Mr. Stillman's appointment, when he acted as County Architect and assumed responsibility for the running of the entire Department.

'Mr. Ralph was a trusted and greatly respected colleague, and during his long period of service with this Authority, came to be regarded as a genuine friend by all who knew him. He will always be remembered as one who gave of his very best to the service of the Council, and his work, I am sure, will remain an example to all.'

William James Venables [*L*] died on 24 March 1958, aged 64.

Mr. Venables was articled to the late R. T. Longden [*F*] and was taken into partnership by him in 1920. Together they were responsible for much work in the Staffordshire area including private houses, inns and public houses at Boothen, Burslem, Leekbrook and Stoke-on-Trent, and the Ophthalmic clinic, Leek, Staffs.

In 1935 he joined Mr. C. F. Barker [*A*] in partnership and a year later they won a competition for the Council Chamber and Offices of Cheadle (Staffs.) R.D.C. Mr. C. L. Williams [*A*] became a partner in the firm of Venables and Williams in 1951, and Mr. Williams is continuing the practice in partnership with Mr. G. A. Ball [*A*] under the style of Venables, Williams and Ball at West Road, Congleton, Cheshire.

Mr. Venables' post-war work had included the estate layout and housing, shops and flats for Biddulph (Staffs.) U.D.C.; the Council Chamber and housing for Newcastle (Staffs.) R.D.C.; and estate layouts and housing for the Coal Industry Housing Association at Madeley, Kidsgrove and Biddulph, Staffs.

Membership Lists

ELECTION: 6 JANUARY 1959

The following candidates for membership were elected on 6 January 1959.

AS FELLOWS (11)

Carey: Oliver Cecil Francis, A.A.Dipl. [*A* 1940], Hitchin.
Chamberlin: Peter Hugh Girard [*A* 1948].
Howrie: Robert John, M.B.E., B.A.(Arch.) (Sheffield) [*A* 1938], Leicester.
Nicol: John [*A* 1946], Belfast.
Searle: David Odell [*A* 1948].
Statham: Stephen Haywood [*A* 1946].
Sweetnam: John Patrick Beamish, Dip.Arch. (The Polytechnic) [*A* 1942], Newbury.
Warwick: Ian Francis, M.B.E., T.D., Dip. Arch.(The Polytechnic), S.P.Dip., A.M.T.P.I. [*A* 1940].
Widdup: Frank Macfarlane, Dipl.Arch. (Leeds) [*A* 1941], Luton.

and the following Licentiates who are qualified under Section IV, Clause 4(*c*)(ii) of the Supplemental Charter of 1925:

Elford: Percy William Tapson, T.D., Plymouth.
Greenaway: Bramwell Victor.

AS ASSOCIATES (35)

Addey: David Mercer, Tunbridge Wells.
Badnell: Gordon John, Dipl.Arch.(Northern Polytechnic), Taplow.
Belford: Shane Boyd, B.Arch.(L'pool), Belfast.
Beresford: (Mrs.) Zoia Ann, Dipl.Arch. (Oxford), Titchfield.
Bonner: Michael Frank, Harwich.
Brown: Brian George, A.A.Dipl.
Darby: Keith Roy, A.A.Dipl.
Everett: Derek George, Dip.Arch.(Leics.), Huntingdon.
Fresson: Kenneth Simon, A.A.Dipl., Reigate.
Gibson: Kenneth Roy, Derby.
Harington: (Miss) Ann, Dipl.Arch.(Oxford).
Harrington: Frederick Robert, A.A.Dipl.
Henderson: Harold, Dip.Arch.(Dunelm), Seaham.
Holmes: Charles Derek, Newcastle upon Tyne.
Hooper: Nicholas Morton Douglas, M.A. (Cantab.), D.A.(Edin.), Sidcup.
Hunt: William Frederick, Dipl.Arch.(Northern Polytechnic).
Jackson: Neil Ozanne, Dipl.Arch.(Northern Polytechnic).
Kimberley: Alan Graham, Dipl.Arch.(Northern Polytechnic), Loughton.
Lewis: Stuart Randolph, A.A.Dipl., Cheltenham.
Lister: Patrick Arthur, Dipl.Arch.(Northern Polytechnic), Walton-on-Thames.
Manousso: Paul.
Milner: Charles Richard, Dipl.Arch.(Northern Polytechnic), Cambridge.
Mitchell: Kenneth William Carmichael, Dipl. Arch.(Northern Polytechnic), Ilford.
Morgan-Jones: David Tremayne, A.A.Dipl., St. Albans.
Nail: William, B.Arch.(Dunelm), Salisbury.
Newman: John Alfred, Dipl.Arch.(Northern Polytechnic).
Parker: Arnold Cecil, Dip.Arch.(Dunelm), Whitley Bay.
Quennell: Nicholas William.
Rosenberg: Stephen Gabriel, A.A.Dipl.
Sellers: Stanley, Dip.Arch.(Birm.), Sutton Coldfield.
Sharp: Dennis Charles, A.A.Dipl., Bedford.
Stevens: Dennis William, Dipl.Arch.(Northern Polytechnic).
Watson: James Spence, B.Arch.(Dunelm), Whitley Bay.

Wren: Murray James.
Young: Brian Miles de Lorentz, A.A.Dipl., Cranbrook.

ELECTION: 10 MARCH 1959

An election of candidates for membership will take place on 10 March 1959. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday 16 February 1959.

The names following the applicant's address are those of his proposers.

AS FELLOWS (9)

Baines: George Grenfell, Dip.T.P., A.M.T.P.I. [*A* 1936], 12 Guildhall Street, Preston, Lancs.; 60 West Cliff, Preston. H. V. Lobb, Professor R. A. Cordingley, G. N. Hill.

Coates: Harold John [*A* 1928], 6 Gray's Inn Square, W.C.1; 19 Russellcroft Road, Welwyn Garden City, Herts. Paul Mauger, A. R. F. Anderson, J. F. Howes.

Goulden: Gontran Iceton, T.D. [*A* 1936], The Building Centre, 26 Store Street, W.C.1; 28 St. Peters Square, Hammersmith, W.6. D. L. Bridgwater, Sir Howard Robertson, H. T. Cadbury-Brown.

Hay: George Stanley [*A* 1934], Architects Department, Co-operative Wholesale Society Ltd., 1 Balloon Street, Manchester 4; 22 Park Gates Drive, Cheadle Hulme, Cheshire. W. J. Reed, Gordon Tait, L. C. Howitt.

Robson: Geoffrey, A.A.Dipl. [*A* 1940], Messrs. Richard Sheppard, Robson and Partners, 5 Southampton Place, W.C.1; The White House, Stoke Common, nr. Slough, Bucks. Richard Sheppard, Harold Conolly, F. R. S. Yorke.

Scott: John Seymour, A.A.Dipl. [*A* 1938], King's Court, 115 Colmore Row, Birmingham 3; Deswood, Mearse Lane, Barnt Green, Worcestershire. Herbert Jackson, A. G. Sheppard-Fidler, A. R. Twentyman.

and the following Licentiates who are qualified under Section IV, Clause 4(*c*)(ii) of the Supplemental Charter of 1925:

Barclay: Thomas, Architectural and Planning Dept., 20 Trongate, Glasgow, C.1; 9 Claremont Terrace, Glasgow, C.3. A. G. Jury, Dr. Ronald Bradbury, W. A. P. Jack.

Knott: Ernest Richard, 74 Lytton Avenue, Letchworth, Herts. C. M. Crickmer, F. J. Lander, W. E. Barnes.

Shaw: John Beetham, J.P., Ministry of Housing and Local Government, Block 3, Government Buildings, Chalfont Drive, Western Boulevard, Nottingham; Appletrees, Bingham, Notts. C. H. Aslin, J. H. Forshaw, and applying for nomination by the Council under Bye-law 3(*d*).

AS ASSOCIATES (46)

The names of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Andrews: Michael George David, M.A. (Cantab.), Dipl.Arch.(U.C.L.), (Bartlett Sch. of Arch.: Univ. of London), 15 Eton Villas, N.W.3. C. D. Andrews, R. R. Grant, S. A. Farmer.

Barzard: Kenneth, (Special Final), 20 Foxhill Close, Greatfield Estate, Hull, Yorks. Lieut.-Colonel J. P. Taylor, Allanson Hick, H. D. Priestman.

Basil: Victor, B.Arch., M.C.D.(L'pool.) (Liverpool Sch. of Arch.: Univ. of Liverpool), 16 Church Road, Wavertree, Liverpool, 15. Prof. R. Gardner-Medwin, Prof. H. M. Wright, R. R. Young.

Bethell: John Raymond Charles, Dip.Arch. (Cardiff), (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 17 Clevedon Road, Newport, Mon. Lewis John, Dr. T. A. Lloyd, C. F. Jones.

Brydson: Martin Keith, Dip.Arch.(Leics.), (Leicester Coll. of Art & Tech. Sch. of Arch.), 252 Leicester Road, Loughborough, Leics. S. Penn Smith, G. A. Cope, F. Chippindale.

Carroll: Westgarth Stanley, Dipl.Arch. (Oxford), (Sch. of Tech. Art & Commerce, Oxford: Sch. of Arch.), 38 Archery Grove, Woolston, Southampton. Colonel R. F. Gutteridge, F. T. Pritchard, Reginald Cave.

Church: John Hugh, Dipl.Arch.(Northern Polytechnic), (Northern Poly. (London): Dept. of Arch.), 64 Grange Road, Sanderstead, Surrey. T. E. Scott, Edwin Williams, C. A. Lucas.

Clark: David Edward, Dip.Arch.(Nottm.), (Nottingham Sch. of Arch.), 16 Audon Avenue, Chilwell, Notts. N. Summers, F. H. Crossley, E. H. Ashburner.

Cooper: Eugene James Brian, Dip.Arch. (The Polytechnic), (The Poly, Regent Street, London: Sch. of Arch.), 'Warley Lea', Great Warley, Brentwood, Essex. J. S. Walkden, J. S. Foster, Peter Goodridge.

Cordin: Ronald Edward, Dip.Arch.(Nottm.), (Nottingham Sch. of Arch.), 21 Villa Road, Nottingham. F. E. Woolley, J. W. M. Dudding, J. G. Woollatt.

Davies: Bernard Albert, (Final), 5 Beaumaris Drive, Llanyrafon, Cwmbran, Mon. T. H. B. Burrough, John Collins, E. H. Button.

Forrest: Alan John, D.A.(Edin.), (Edinburgh College of Art: Sch. of Arch.), 34 York Street, W.1. Prof. R. H. Matthew, R. Wallace-Bateman, Hubert Bennett.

Goodwin: Neville Rex, Dip.Arch.(Leics.), (Leicester Coll. of Art and Tech. Sch. of Arch.), County Architect's Department, County Hall, West Bridgford, Nottingham. Ernest Frear, Donald Gibson, L. R. Bradshaw.

Hart: Anthony Giles, Dip.Arch.(Dunelm), (King's Coll. (Univ. of Durham) Newcastle upon Tyne, Sch. of Arch.), 40 Lesbury Road, Heaton, Newcastle upon Tyne 6. Prof. W. B. Edwards, J. H. Napper, F. Fielden.

Hewett: Colin William, (Final), 27 Spring Crescent, Southampton. A. C. Townsend, Ernest Bird, J. J. Hill.

Hook: Brian Laurence, Dip.Arch.(Oxford), (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.), The Martyns, Clifton, Deddington, Oxford. Reginald Cave, Neville Conder, Sir Hugh Casson.

Howell: Christopher Edward, Dipl.Arch. (U.C.L.), (Bartlett Sch. of Arch.: Univ. of London), 10 Parkway, Southgate, N.14. Prof. H. O. Corfiato, R. C. White-Cooper, Thomas Ritchie.

Humphries: John Willis, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 'Renfrew', Amersham Way, Little Chalfont, Bucks. J. S. Walkden, J. F. R. Gooding, G. A. G. Miller.

Johnson: Patrick Leonard, (Final), 252 Scott Ellis Gardens, St. John's Wood, N.W.8. R. Hellberg, F. R. S. Yorke, Maurice Harris.

Johnson: Victor Frederick, A.R.I.C.S., (Special Final), 25 Windermere Road, West Wickham, Kent. E. H. Davie, Donald Macpherson, T. Braddock.

Kay: Thomas, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), Flat 6, 37 Westbourne Terrace, W.2. J. S. Walkden, H. W. Rosenthal, Peter Goodridge.

Kellett: David Featherstone, Dipl.Arch. (Leeds), (Leeds Sch. of Arch.), 109 Tadcaster Road, York. H. Colbeck, A. H. Ley, A. L. Luke.

Leech: Bernard Alfred John, (Special Final), 10 Minterne Avenue, Sittingbourne, Kent. Paul Nightingale, Edwin Rice, Arthur Korn.

Littler: John Albert, (Final), 59 Elborough Street, Southfields, S.W.18. E. R. Collister and applying for nomination by the Council under Bye-law 3(*d*).

Long: Derrick Charles, Dip.Arch.(Cardiff), (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 11 Ullswater Avenue, Lake Road West, Roath Park, Cardiff. Lewis John, D. G. Walton, C. F. Jones.

Makin: Philip Edwin, B.Arch.(Dunelm), (King's Coll. (Univ. of Durham) Newcastle upon Tyne, Sch. of Arch.), 24 Charlemont Road, West Bromwich, Staffs. Prof. W. B. Edwards, J. H. Napper, F. Fielden.

Merrylees: Andrew, D.A., Dip.T.P.(Glas.), (Glasgow Sch. of Arch.), School Road, New Mains, Lanarkshire. Basil Spence, Prof. W. J. Smith, J. S. Craig.

Moffatt: Benjamin Thomas George, Dip. Arch.(Leics.), (Leicester Coll. of Art and Tech. Sch. of Arch.), 'Elmcote', 9 Elms Road, Leicester. T. W. Haird, G. A. Cope, S. Penn Smith.

Mutch: John Nicol, D.A.(Dundee), (Dundee Coll. of Art: Sch. of Arch.), 29 Gleanearn Road, Perth. Prof. John Needham, G. C. Young, K. M. Young.

Owusu Addo: John, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 96 Chevening Road, N.W.6. J. S. Walkden, H. W. Rosenthal, Peter Goodridge.

Perrett: Francis John, (Special Final), Chantry Mill, Storrington, nr. Pulborough, Sussex. C. G. Stillman, Sir Edward Maufe, Ernest Seel.

Poole: Derek Harold William, B.Arch., M.C.D.(L'pool.), (Liverpool Sch. of Arch.: Univ. of Liverpool), 5 York Road, St. Albans, Herts. Prof. R. Gardner-Medwin, Prof. H. M. Wright, Prof. R. H. Matthew.

Poulton: John Carey, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 67 Hall Road, Leckhampton, Cheltenham, Glos. J. S. Walkden, Lieut.-Colonel G. W. H. Ryland, Eric Cole.

Pym: William Edwin, (Special Final), 'Clovelly', Melton Road, Sprotborough, Doncaster. Hugh Smith, A. W. Glover, J. W. Davidson.

Redpath: George McGill, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), 4 Craighall Crescent, Edinburgh 6. Applying for nomination by the Council under Bye-law 3(*d*).

Smith: Derek Frewen, (Final), 28 Croyde Avenue, Corby, Northants. H. Schofield, Dr. Denis Harper, T. H. B. Burrough.

Smith: John Michael, B.A.Arch.(Sheffield), (Univ. of Sheffield, Dept. of Arch.), 62 Fletchamstead Highway, Coventry. Prof. Stephen Welsh, Hubert Bennett, Prof. John Needham.

Spouse: Donald Morrison, (Final), 14 Windsor Street, West Hartlepool, Co. Durham. A. W. Glover, F. Chippindale, D. A. Fowler.

Stott: John Richard, Dipl.Arch.(Kingston), (Sch. of Art, Kingston-upon-Thames. Dept. of Arch.), 12 Motspur Park, New Malden, Surrey. Hubert Bennett and applying for nomination by the Council under Bye-law 3(*d*).

Taylor: Alan Robert, Dipl.Arch.(Northern Polytechnic), (Northern Poly. (London): Dept. of Arch.), 192 Ellerdine Road, Hounslow, Middx. T. E. Scott, C. G. Bath, S. F. Burley.

Thraves: Anthony John, Dip.Arch.(Cardiff), (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 108 Fields Park Road, Newport, Mon. Lewis John, Dr. T. A. Lloyd, C. F. Jones.

Toft: Eric, (Final), Flat 5, Newstead House, Clinton Avenue, Hucknall Road, Nottingham. H. B. Marshall, N. Summers, J. W. M. Dudding.

Vincent: David Roy, (Final), 15 Westbrooke Road, Alton, Hants. A. C. Townsend, Frank Risdon, G. M. Aylwin.

Williams: Gwyn, Dipl.Arch.(Kingston), (Sch. of Art, Kingston-upon-Thames: Dept. of Arch.), 11 Waverley Avenue, Surbiton, Surrey. E. A. W. Ixer, Eric Lyons, Norman Westwood.

Williams: Peter Charles, Dip.Arch.(Cardiff), (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 4 Preston Avenue, Newport, Mon. Lewis John, Johnson Blackett, Dr. T. A. Lloyd.

Williamson: Derrick Charles, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 14 Kelmscott Road, S.W.11. J. S. Walkden, G. S. Rhodes, Alick Low.

ELECTION: 5 MAY 1959

An election of candidates for membership will take place on 5 May 1959. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Friday 1 May 1959.

The names following the applicant's address are those of his proposers.

AS FELLOWS (3)

Muston: George Ronald Colin [*A* 1950], 39 Johnston Street, Wellington, C.1., New Zealand; 57 Laings Road, Lower Hutt, New Zealand. J. I. King, Prof. C. R. Knight, W. H. Gummer.

Taylor: Eric [*A* 1950], Municipal Architect, Kuala Lumpur, Malaya; 19 Kenny Rise, Kuala Lumpur. W. I. Watson, K. S. Ng, C. Y. Koh.

Ward: Donald Leslie [*A* 1949], Department of Architecture, Nigerian College of Technology, Zaria, Nigeria. A. M. Chitty, Prof. H. O. Corfiato, J. M. Scott.

AS ASSOCIATES (8)

The names of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Balodis: Janis (passed a qualifying exam. approved by the R.A.I.A.), 12 Isabella Crescent, Manning, Western Australia. E. L. B. Henderson, K. C. Duncan, R. Summerhayes.

Chan: Fook Ming, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), Architects Office, Public Works Department, Penang, Federation of Malaya. Applying for nomination by the Council under Bye-law 3(*d*).

Cheang: Kok Cheow, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), Architects Branch, P.W.D. Fed. H.Q., Maxwell Road, Kuala Lumpur, Malaya. Applying for nomination by the Council under Bye-law 3(*d*).

Easton: John Samuel, (Final), c/o Messrs. J. M. Wilson, H. C. Mason & Partners, P.O. 1222, Steamer Point, Aden. Sir Giles Scott, F. G. Thomas, J. M. Wilson.

Fowler: John David, Dip.Arch.(The Polytechnic), (The Poly., Regent Street, London: Sch. of Arch.), 321 Furnald Hall, Columbia University, New York 27, U.S.A. J. S. Walkden, H. W. Rosenthal, J. S. Foster.

Mitchell: Kenneth A., (Special Final), c/o Messrs. MacDonald Layton Co., Ltd., West Wharf, Karachi, W. Pakistan. Oliver Law, Gordon Gillman, Richard Mellor.

Singh: Sudarshan, (Special Final), P.O. Box 10240, Nairobi, Kenya Colony. C. J. Crowe, L. G. Jackson, H. D. Archer.

Wong: Hong Yuen, (Special Final), 28 Caxton House, 1 Duddell Street, Hong Kong. W. W. C. Shewan, Eric Cumine, R. E. Lee.

Members' Column

This column is reserved for notices of changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. C. J. Cheale [*L*] has been appointed Development Architect to the Public Works Department, Accra, Ghana.

Mr. Joseph Robotham [*A*] has been appointed Senior Assistant Architect to the University College of North Staffordshire and after 15 February his address will be 275 Chaplin Road, Dresden, Stoke-on-Trent, Staffs.

Mr. W. E. Tatton Brown, M.A., A.M.T.P.I. [*A*], Deputy County Architect for Hertfordshire, has been appointed County Architect of Middlesex in succession to **Mr. C. G. Stillman** [*F*], who is retiring in April.

Mr. C. Fleetwood Walker [*A*] has been appointed Senior Lecturer in Interior Design in the School of Industrial Design, at Birmingham College of Arts and Crafts. He will continue in practice at 13 Lyttleton Road, Edgbaston, Birmingham, 16 (Edgbaston 1063).

Mr. G. H. Wilkinson, A.M.T.P.I. [*A*] has taken up the appointment of Town Planning Officer and Borough Architect, Ballymena, Co. Antrim, where he will be pleased to receive trade catalogues.

PRACTICES AND PARTNERSHIPS

On his retirement from the Hertfordshire County Council, **Mr. C. H. Aslin,** C.B.E., P.P.R.I.B.A., has taken up the position of consultant to **Messrs. Morrison and Partners,** of Derby, London and Sheffield. **Mr. Samuel Morrison,** T.D. [*F*] and **Mr. William John Farmer** [*A*] have taken **Mr. Francis Minter** [*A*] into partnership in the Derby practice at St. Alkmund House, 103 Belper Road. In the London practice Mr. Morrison and Mr. Farmer have taken **Mr. Raymond T. Dennis** [*A*] and **Mr. Gerald F. Sheard** [*A*] into partnership at 30B Wimpole Street, W.1, to which address Mr. Sheard has transferred his former practice at 14 Fitzroy Street, W.1. The Sheffield practice will continue at 15 Northumberland Road, Sheffield, 10, the partners being Mr. Morrison, **Mr. John B. Jefferson** [*A*] and **Mr. Charles A. E. Davy** [*A*].

Mr. A. Stanley Barnes [*F*] has taken **Mr. John G. Dallow** [*A*] into partnership under the style of **A. Stanley Barnes and Dallow** at 7 Hamilton Square, Birkenhead, Cheshire.

Mr. J. Percival Chaplin [*A*] has taken **Mr. R. C. Burgoine** [*A*] into partnership. The practice will be continued from 4 Cathedral Close, Norwich, and also from the new branch office at 12 Regent Street, Luton.

Mr. Donald A. Goldfinch, E.R.D. [*F*] and **Mr. Louis O. Tippins** [*A*] have entered into partnership under the style of **Donald A. Goldfinch and Partners** at 101 Hagley Road, Edgbaston, Birmingham, 16 (Edgbaston 1664).

Mr. G. H. Hawkins [*F*] is continuing the practice of **Matkin and Hawkins** under the same style at Barclays Bank Chambers, Fawcett Street, Sunderland (Sunderland 70752-3), **Mr. G. E. Matkin** having relinquished his partnership.

Mr. Henry R. Humphreys [*A*] has terminated his association with the Anderson Construction Company and will practise from Brazierssend, Chesham, Bucks, as acoustic consultant.

Mr. Norman V. Hyde [*A*] has started practice on his own account at 117 Bancroft, Hitchin, Herts., where he will be pleased to receive trade catalogues, etc.

Mr. David Mylne [*A*] has left the British Aluminium Company to take over the practice of the late George Duns [*L*]. Mr. Mylne will continue the practice under the existing style of **Walter Duns** at Langtongate, Duns, Berwickshire (Duns 3189), where he will be pleased to receive trade catalogues.

Major A. I. Richards [*F*] has retired from partnership with **Mr. W. W. J. Trollope** [*L*], owing to increasing ill-health. Mr. Trollope will continue the practice of **Richards and Trollope** at 14 Sackville Street, Piccadilly, London, W.1 for the time being, but will eventually practise under his own name at 21 Raleigh Drive, Surbiton, Surrey.

Mr. A. E. F. Saunders [*A*] is now in practice at 185 High Street, Guildford (Guildford 69183).

Mr. T. Edgar Smith [*F*] has retired from partnership with **Mr. William G. Wilson** [*A*] and **Mr. S. H. Cox** [*A*] in the firm of **Smith, Wilson and Cox** of 103 Bute Street, Cardiff, but the name of the firm will remain unchanged.

Mr. Robert Stephenson [*A*] will cease to practise from 1 Old Market Place, Grimsby, Lincs. after 28 February, in order to join **Mr. G. L. Taylor** [*A*] in partnership in the practice of **Messrs. Taylor, Knight and Co.,** at Brooksmoor House, Grove Road, Moorgate, Rotherham, Yorks.

Mr. A. M. Stewart [*A*], practising under the style of **George Watt and Stewart,** at 214 Union Street, Aberdeen, has taken **Mr. John G. Davidson** [*A*] into partnership. The name of the firm will remain unchanged.

Mr. James A. Tadman [*F*], formerly Chief Architect to Messrs. James Hole and Co., brewers, Newark, has commenced private practice at 29 Lombard Street, Newark, Notts.

Mr. Alwyn Underdown [*F*] has retired, and his practice will be carried on by **Mr. John Whinnett** [*A*] under the style of **Underdown and Whinnett,** Architects, at Alliance Chambers, 22 Cornfield Road, Eastbourne (Eastbourne 4054).

The partnership of **Vallis and Bird (Ronald Vallis** [*F*] and **Pelham Bird** [*A*]) at 6 North Parade, Frome, Somerset, and Georgian House, Greenhill, Sherborne, Dorset, has been dissolved by mutual agreement as from 30 September 1958. The practice will now be carried on by Mr. Vallis under his own name.

CHANGES OF ADDRESS

Mr. Gerald M. Blackwood [*A*] has changed his address to c/o The Department of Public Works, Queensland, Architectural Branch, Treasury Building, Brisbane, Australia.

Mr. Ernest S. Boyer [*A*] has changed his office address to 88-90 Gray's Inn Road, London, W.C.1 (Chancery 3831-2).

Mr. Peter Bynoe [*A*] has changed his address to c/o Works and Hydraulics Department, Edward Street, Port of Spain, Trinidad, W.I., where he will be pleased to receive trade catalogues.

Mr. E. Jerden Cook [*A*] has changed his address to 12 Queen Street, Maidenhead, Berks.

Mr. J. G. Coppock [*A*] has moved to new offices at 1 University Street, Belfast (Belfast 27669), where he will be pleased to receive trade literature.

Mr. Donald Cowan [*A*] has changed his address to Wilson-Bates Building, Hillsboro Road, Nashville, Tennessee, U.S.A.

Mr. Michael Darracott [*A*] has changed his private address to 32 Nevern Place, London, S.W.5 (Freemantle 5371). He will continue to practise from 154b Walton Street, London, S.W.3 (Knightsbridge 6908).

Mr. F. Paul Davies [*A*] has changed his address to 'Omega', 23 Ripley Road, Hampton,

Middlesex, where he will be pleased to receive trade literature.

Mr. R. H. Dolan [*A*] has changed his address to Maryland, Kenwood Drive, Burwood Park, Walton-on-Thames, Surrey (Esher 3480), where he will be pleased to receive trade catalogues.

Mr. Peter P. Drew [*A*] has changed his address to 85 Eastwick Road, Burwood Park, Walton-on-Thames, Surrey (Esher 4327).

Messrs. Clifford Duke and Partners [*F*] of Lusaka, N. Rhodesia, have opened an office at 103 Union Avenue, Salisbury, S. Rhodesia, where they will be pleased to receive trade catalogues, etc.

Mr. C. W. Dunnington [*A*] has changed his address to 62 Hutton Avenue, Haughton, Darlington, Co. Durham.

Mr. W. Brian Edwards [*A*] has changed his address to c/o Messrs. Diamond, Clarke and Associates, 11536 Jasper Avenue, Edmonton, Alberta, Canada.

Mr. Geoffrey Entwistle [*A*] has changed his address to Rue Marterey 15, Lausanne, Switzerland.

Mr. Gordon S. Esslemont [*A*] has changed his office address to Crown Mansions, 41½ Union Street, Aberdeen (Aberdeen 51755).

Mr. A. C. Miller Forward [*A*] has changed his address to 44 Meadow Road, Pinner, Middlesex.

Messrs. Fry, Drew, Drake and Lasdun have taken additional premises at 3 Albany Terrace, London, N.W.1 (Hunter 1822–6). Of the senior partners, **Mr. E. Maxwell Fry,** C.B.E. [*F*] and **Miss Jane B. Drew** [*F*] will remain at 63 Gloucester Place, London, W.1, and **Mr. Lindsey Drake** [*A*] and **Mr. Denys Lasdun,** M.B.E. [*F*] will be moving to the new address.

Mr. Robert Garland [*A*] has changed his address to Robin Hill, Cross Street, Helston, Cornwall.

Mr. Donald A. Goldfinch, E.R.D. [*F*] has resigned his appointment as Architect to the Birmingham Regional Hospital Board and has changed his address to 101 Hagley Road, Edgbaston, Birmingham, 16 (Edgbaston 1664), where he will be pleased to receive trade catalogues, etc.

Mr. Malcolm J. Hamilton [*L*] has changed his address to 'Anstey', Catsfield Green, Battle, Sussex.

Mr. L. O. L. Hannen [*L*] and **Mr. John H. Markham** [*F*] have changed their address to 6 Woods Mews, Park Lane, London, W.1, where they will continue their practice under the style of **Leo Hannen Associates.**

Mr. Roy A. S. Holden [*A*] has changed his address to 15 Juniper Way, Tilehurst, Reading, Berks.

Mr. Peter D. Howell [*A*] has changed his office address to 134 St. Helens Road, Swansea (Swansea 57876–7).

Mr. L. E. G. Hunt [*F*] of 10 and 12 Cathedral Street, Norwich, and 1 Minstergate, Thetford, has opened a branch office at Eaton House, High Street, Newmarket (Newmarket 3212).

Dr. A. Luntz [*A*] has changed his address to Royal Park Receiving House, Melbourne, N.2, Victoria, Australia.

Mrs. Barbara M. Martin [*A*] and **Mr. Bruce Martin** [*A*] have changed their address to The Old Cottage, Bury Green, Little Hadham, Herts. (Bishop's Stortford 1399).

Mr. Alan R. Mason [*A*] has changed his address to Ministry of Housing, Accra, Ghana.

Mr. Colin A. Moore [*A*] has changed his address to 61 Fourth Avenue, Chelmsford, Essex.

Mr. Victor Nicholas [*A*] has changed his address to No. 6 Flat, York Place Mansions, 117 Baker Street, London, W.1 (Hunter 2243).

Mr. Paul Ospalak [*A*] has changed his address to Apartment 401, 1598 Bathurst Street, Toronto 10, Ontario, Canada.

Mr. Graham Pegg [*A*] has changed the address of his main office to 27 Hall Quay, Great Yarmouth (Great Yarmouth 3173).

Mr. Ronald P. Radley [*A*] has changed his address to 5 Vanbrugh Hill, Blackheath, London, S.E.3.

Mr. William Ryder, A.M.T.P.I. [*A*] has changed his address to 21 Bruton Street, Berkeley Square, London, W.1.

Mr. H. Starczewski [*A*] has changed his address to 161 St. Lucie Drive, Toronto 15, Ontario, Canada.

Mr. Patrick Sweetnam [*F*] has changed his private address to Angel's Way, Old Lane, Enborne, Newbury. His telephone number remains Newbury 1692.

Messrs. Michael Tapper and Lewis [*F*/*A*] have changed their address to 4 Yeoman's Row, London, S.W.3 (Knightsbridge 4610).

Mr. Laurence G. D. Thompson [*A*] and **Mrs. Eleanor G. Thompson** [*A*] have changed their address to Lauriston, Whin Road, Ballygalley, Co. Antrim, N. Ireland (Ballygalley 263).

Mr. Anthony W. Thorpe [*A*], who has been resident in Wellington, New Zealand, since May 1955, has returned to the U.K. for a few months. His temporary address will be Trecregyn Farm, Llangranog, Llandyssul, Card.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate, A.A.Dipl. (early 30's), with small but progressive practice, wishes to escape from London, and would like to amalgamate or to purchase a share in a larger practice in Kent, Surrey, Sussex or Hampshire. Box 11, c/o Secretary, R.I.B.A.

Associate, D.A.(Edin.) (30), with seven years' varied experience at home and abroad, desires partnership or responsible position leading shortly to partnership, preferably overseas, with a view to taking over from retiring principal. Keen, ambitious and hard-working. Some capital available. Box 13, c/o Secretary, R.I.B.A.

Partnership wanted in established country or provincial practice by experienced and energetic architect. Capital available. Box 15, c/o Secretary, R.I.B.A.

Architect, with small London practice, wishes to meet members similarly placed, age 30–40, with the object of discussing a group practice on partnership lines in order to establish a large practice and to increase one's scope. Must have a contemporary outlook, with work in hand. Box 16, c/o Secretary, R.I.B.A.

Qualified architect and town planner (46), with excellent all-round experience, at present in responsible position, seeks partnership or senior appointment in Newcastle upon Tyne area. Some capital available. Replies confidential. Box 19, c/o Secretary, R.I.B.A.

Associate (37) would welcome the opportunity to discuss with any principal the prospect of an ultimate partnership or purchase of the practice on gradual retirement. Member is keen and energetic and has had responsible and varied experience both in the U.K. and overseas. Opportunities existing in the southern counties would be particularly welcome but any suggestion would be considered. Box 20, c/o Secretary R.I.B.A.

Associate (46), with wide experience, seeks partnership or appointment as assistant with prospects of partnership. Some capital available. Box 21, c/o Secretary, R.I.B.A.

Associate, with seven years' experience in one of the foremost progressive firms of architects, at present running his own practice in London, seeks amalgamation, partnership or a position leading to partnership in an established progressive firm. Capital and work available. Box 22, c/o Secretary, R.I.B.A.

Member requires small practice in south-east London. Would take over gradually or would accept accommodation only. Blackheath area preferred. Some capital available. Box 23, c/o Secretary, R.I.B.A.

Associate (35), with eight years in London practice, including three years as principal, seeks partnership or senior appointment where all-round experience and energy would be of value. Capital available. Further details from Box 114, c/o Secretary, R.I.B.A.

WANTED AND FOR SALE

For sale. The following books: *Elizabethan Interiors*, by C. J. Charles, 1913, First Edition; *Civil Architecture*, by Sir William Chambers, MDCCCXXXV, Fifth Edition; *First Book of Architecture*, by Andrea Palladio, MDLXX, from First Italian Edition; *Elementary Principles of Carpentry*, by Thomas Tredgold, 1885, Sixth Edition; *Gothic Architecture*, by A. Pugin, 1825, Vol. No. 1 and Vol. No. 2, 1823; *The Practical Building*, by William Pain, MDCCLXXXIX, Fourth Edition; *Gothic Ornaments*, by James K. Colling, 1848, Vols. No. 1 and No. 2, all loose plates. Box 8, c/o Secretary, R.I.B.A.

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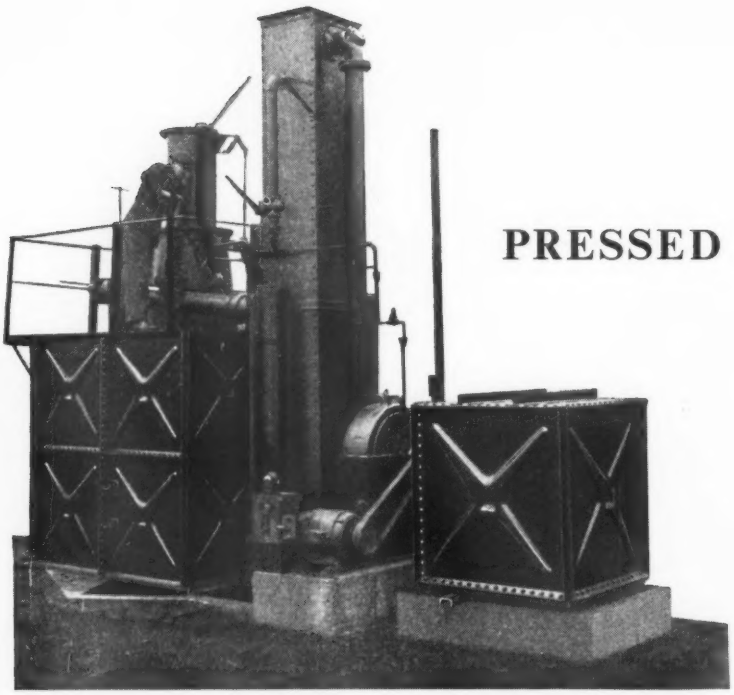

Tanks incorporated in a plant for the generation of gas from waste organic materials.
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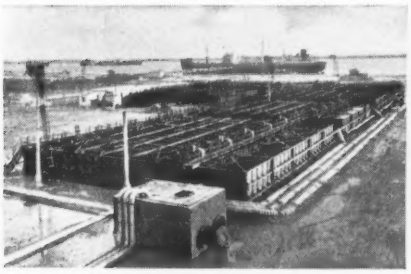
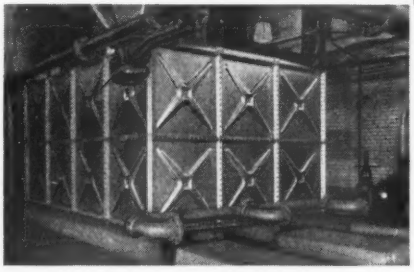
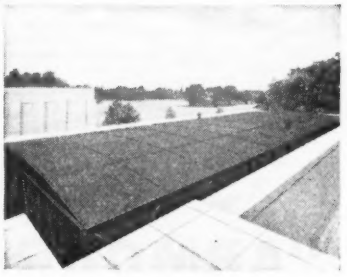


Tanks for the separation of oil and sludge from refinery effluent.
(Photo courtesy British Petroleum Co. Ltd.)



One of several boiler reserve water tanks erected inside a power station.
(Photo courtesy Central Electricity Generating Board)

A covered tank on the roof of the Clarendon Laboratory (Physics), Oxford University



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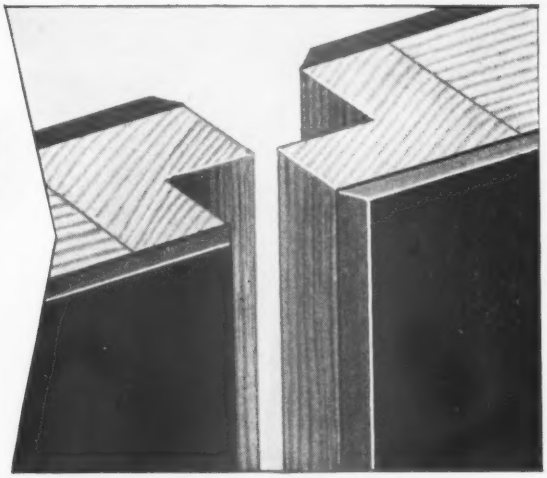

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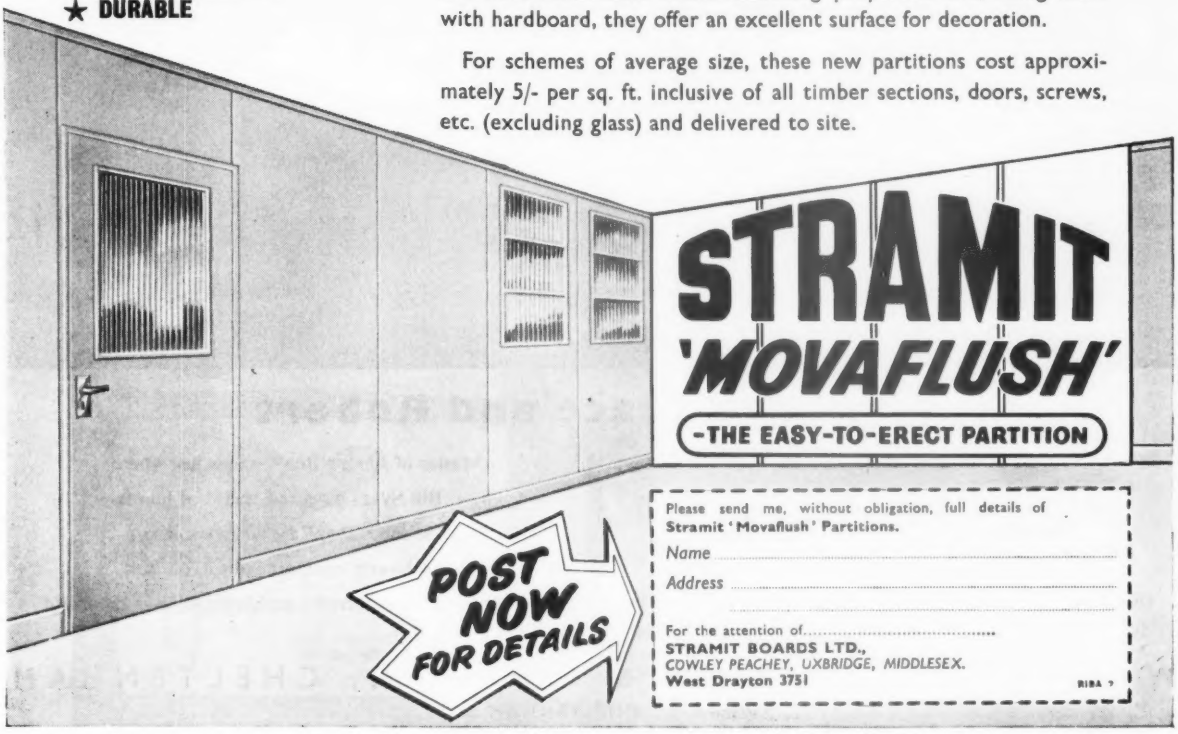

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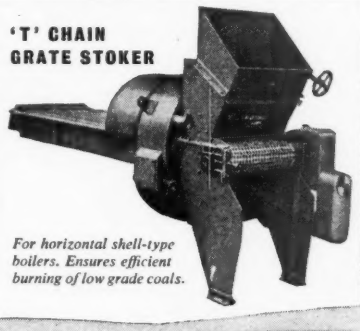

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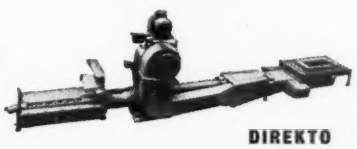

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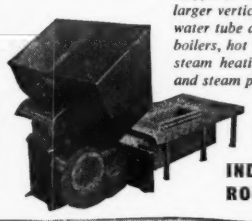

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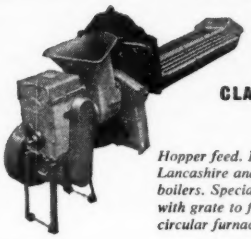

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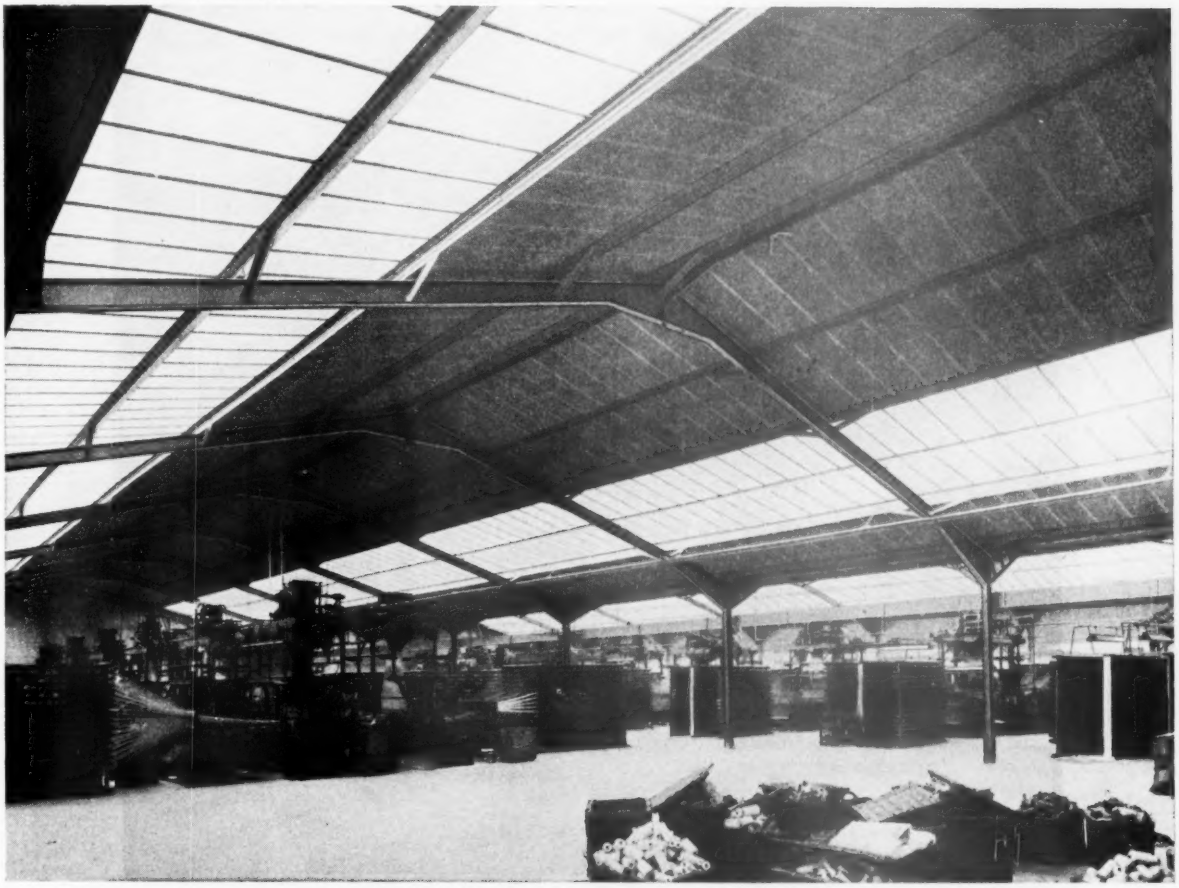

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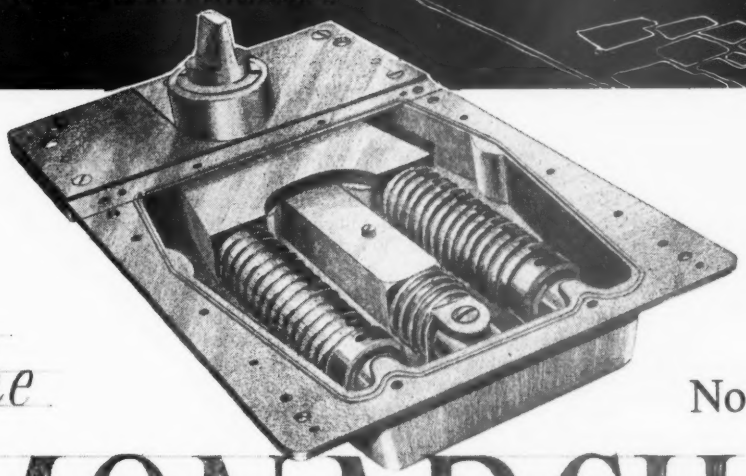

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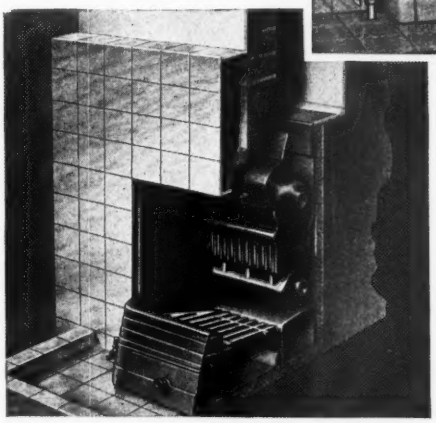

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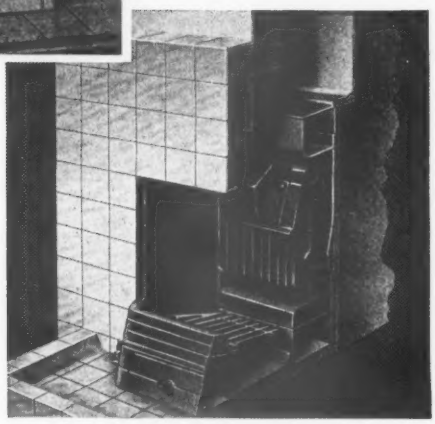

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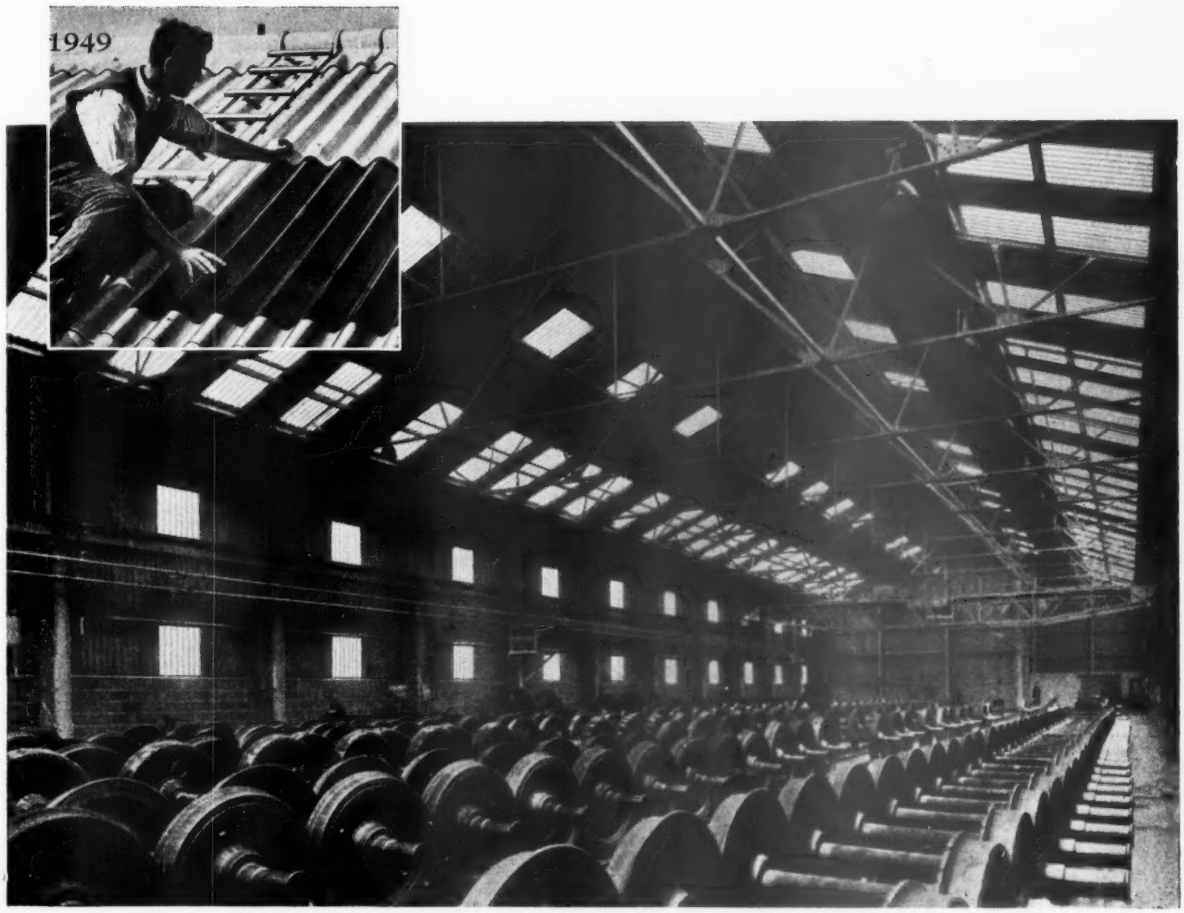

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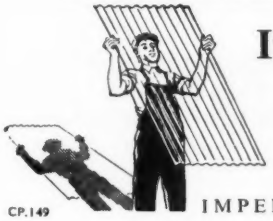

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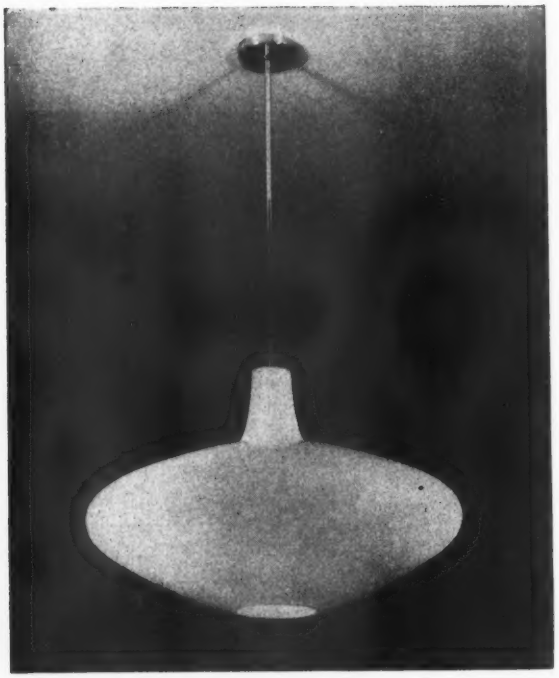

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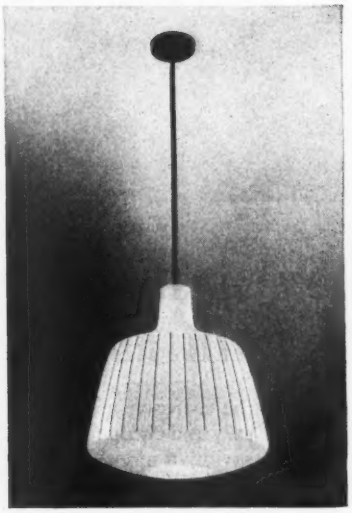

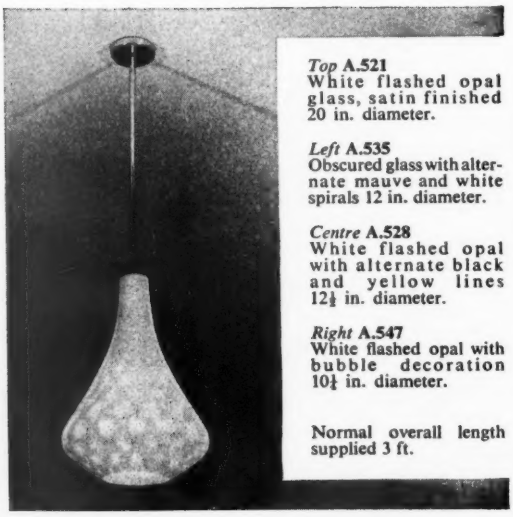

Top **A.521**
White flashed opal glass, satin finished 20 in. diameter.

Left **A.535**
Obscured glass with alternate mauve and white spirals 12 in. diameter.

Centre **A.528**
White flashed opal with alternate black and yellow lines 12½ in. diameter.

Right **A.547**
White flashed opal with bubble decoration 10½ in. diameter.

Normal overall length supplied 3 ft.

These designs by Troughton & Young are the latest additions to the MONDOLITE range of lighting fittings and consist of four basic shapes available in plain flashed opal glass, plus a selection of decorative effects. All glassware is open at the bottom to allow re-lamping, and to prevent the accumulation of dust and insects. Lamp size up to 200 watt. The glassware is easily removed for cleaning without the aid of tools. Suspensions are available in satin black or polished brass.

Write for leaflet ref: TYL 14/RIBA **TROUGHTON & YOUNG**

TROUGHTON & YOUNG (Lighting) LTD., *The Lighting Centre*, 143 Knightsbridge, London, S.W.1.
Phone: KENsington 3444, *and at Rodney Street, Liverpool 1.*

Ref. R.F.W.24

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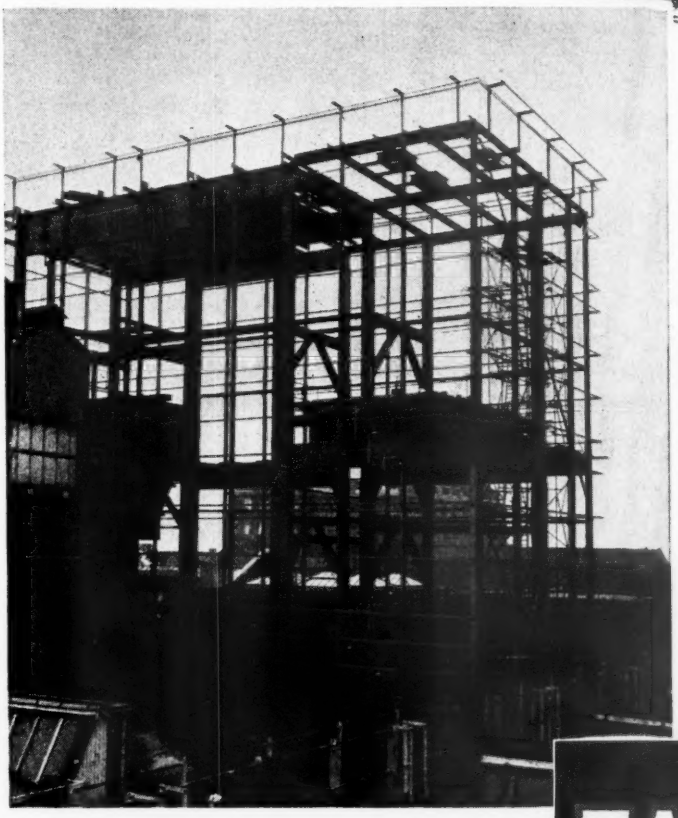

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Illustration by courtesy of Imperial Chemical Industries Limited, Metals Division.

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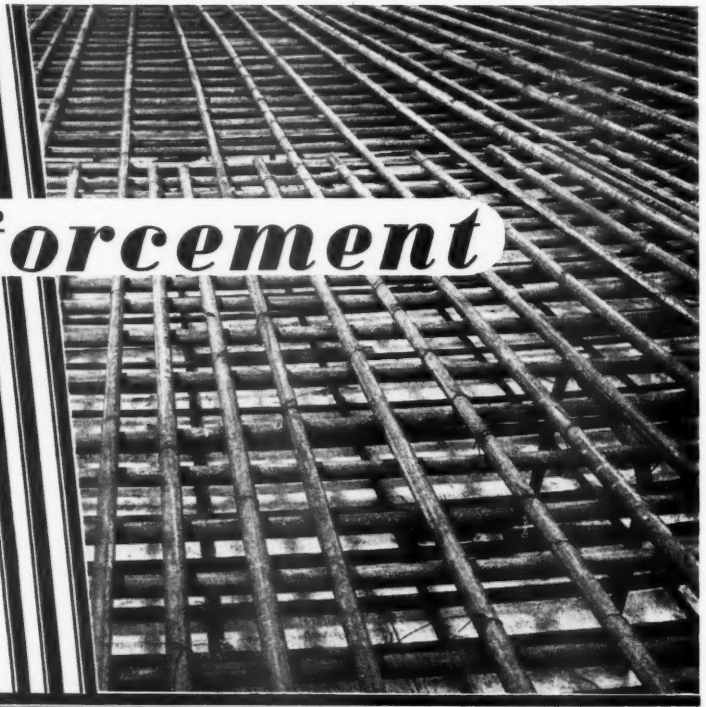

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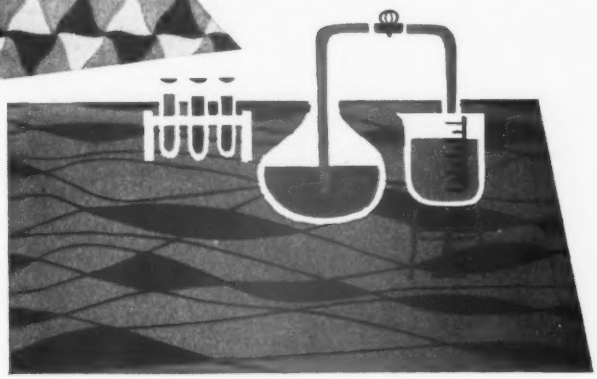

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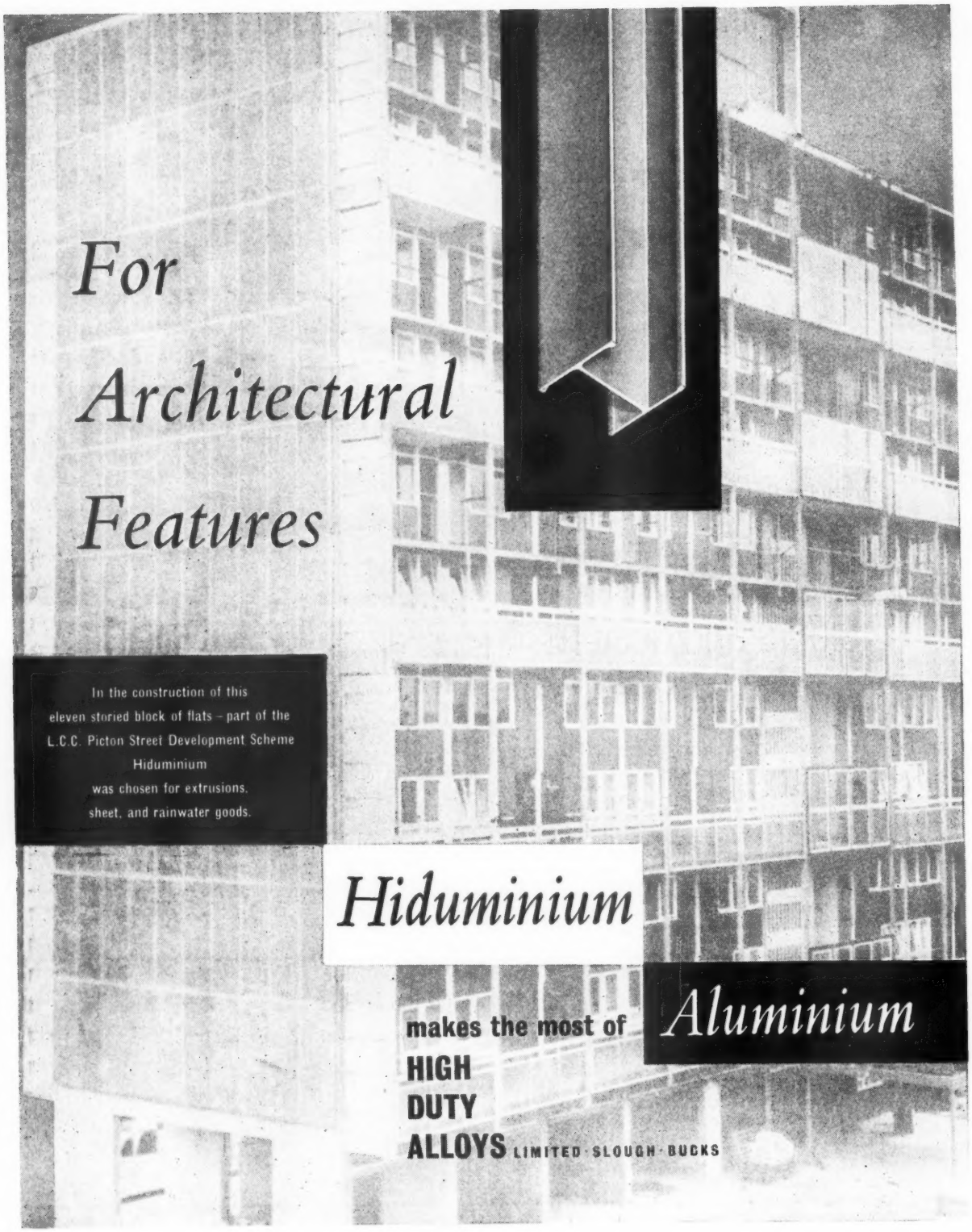
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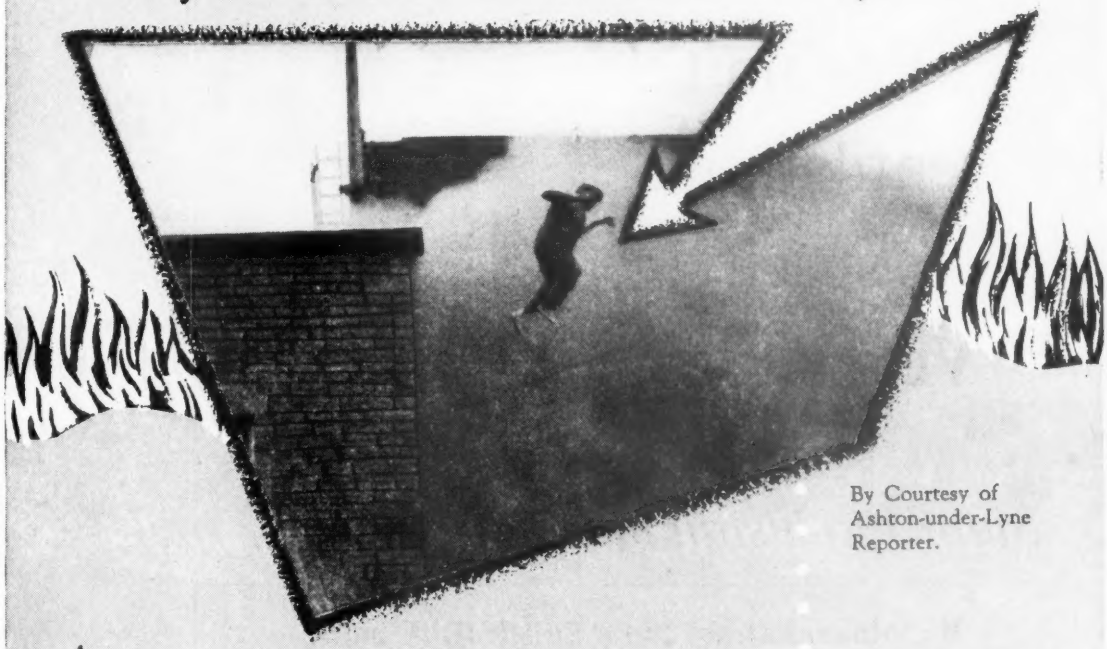

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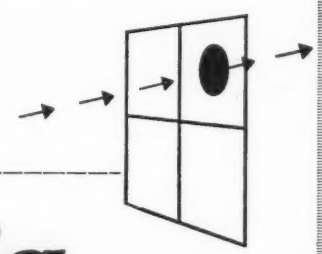

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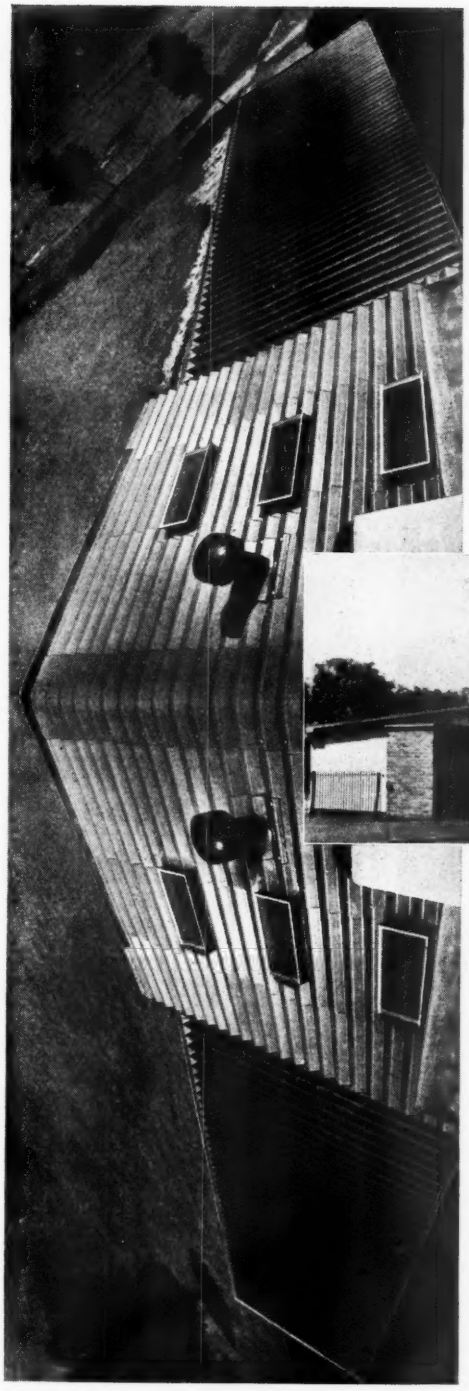

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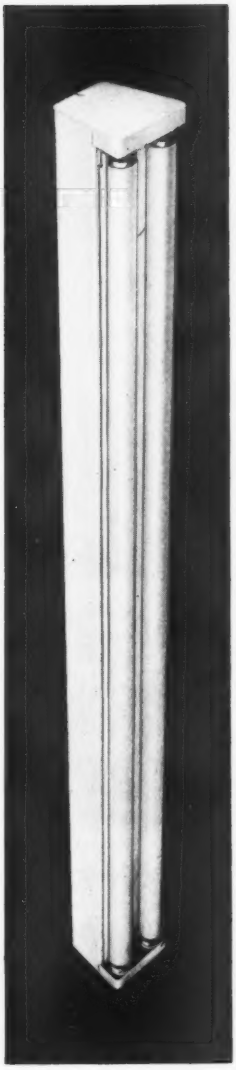
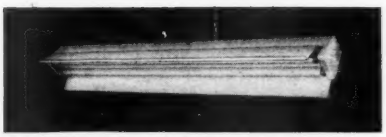
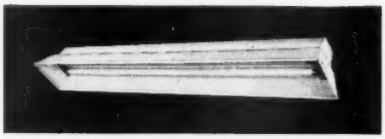


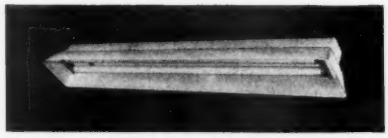


Metal Reflector, open ended CHILTERN

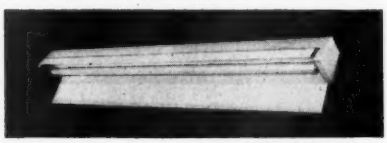


Metal Reflector, closed ended COTSWOLD

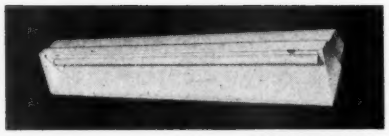
Perspex Reflector, open ended CHEVIOT



Perspex Reflector, closed ended MENDIP



CHALKBOARD
(Open ended)



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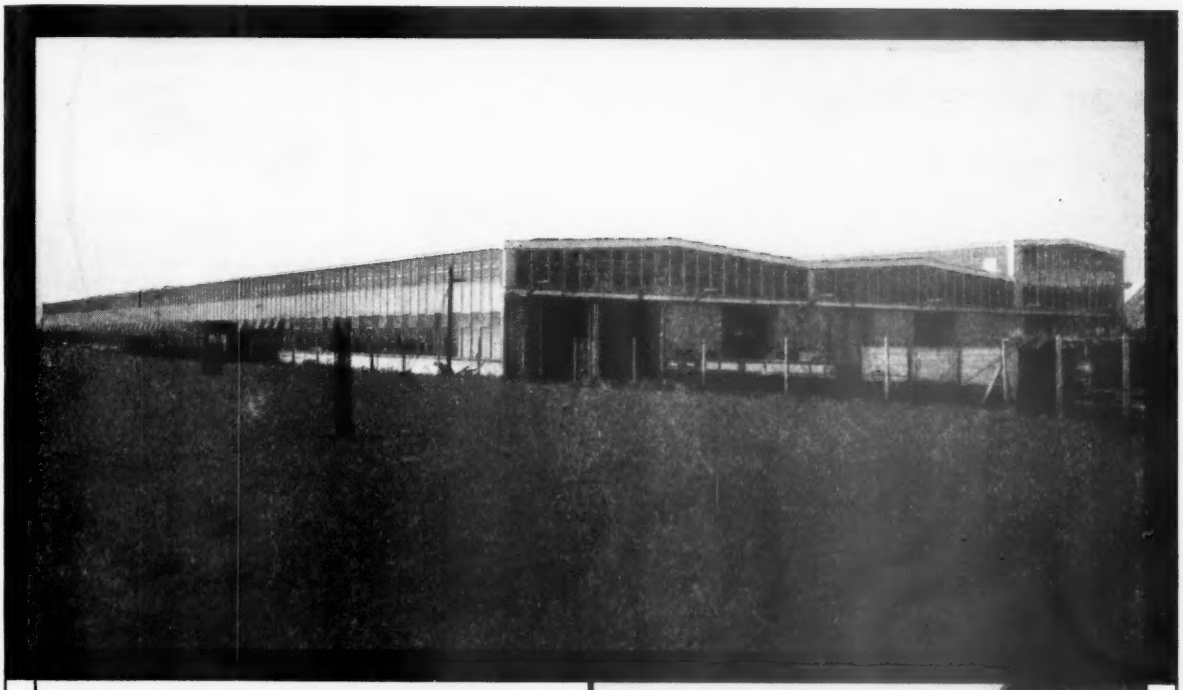

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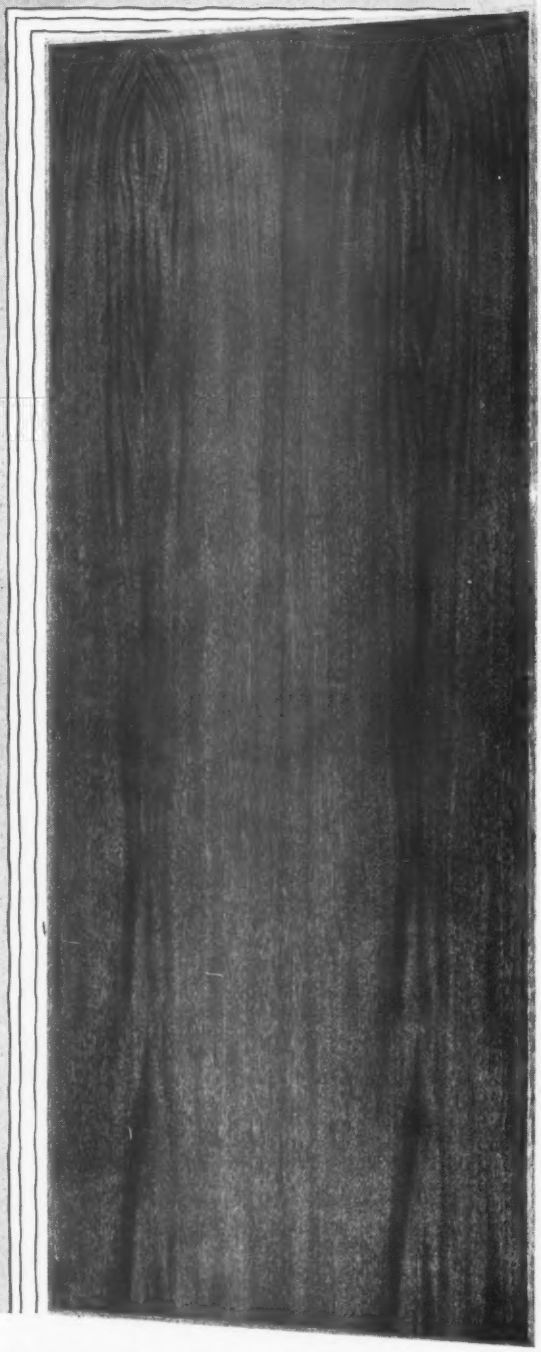

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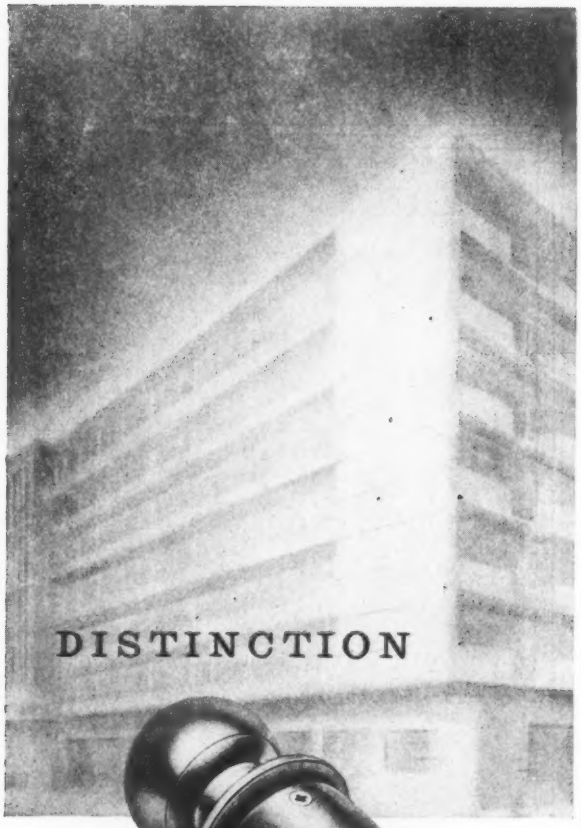

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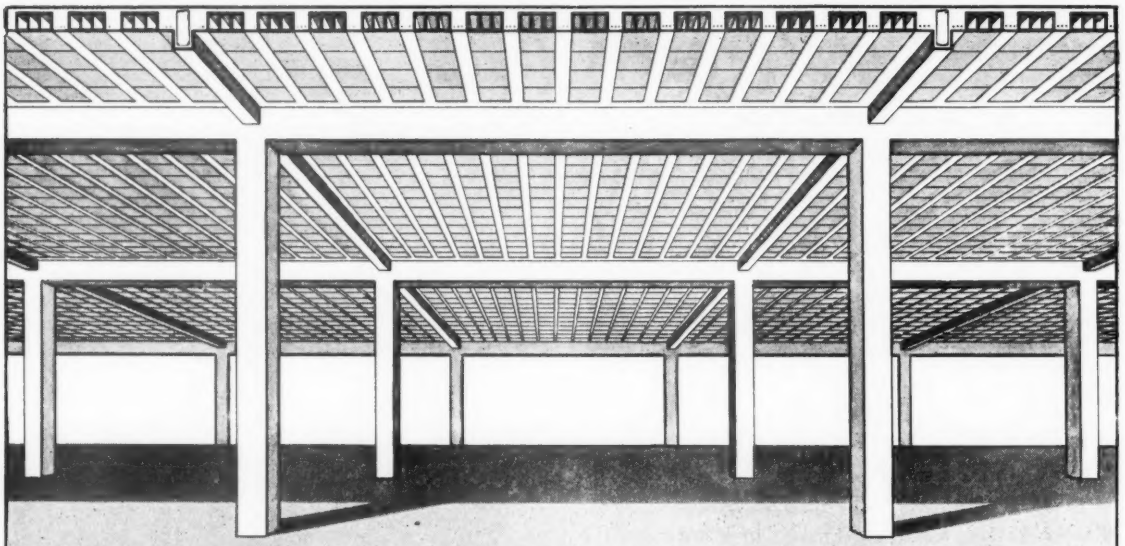

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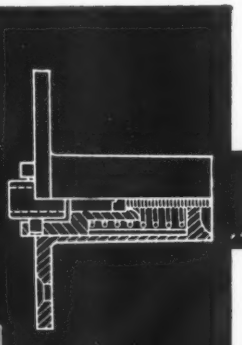
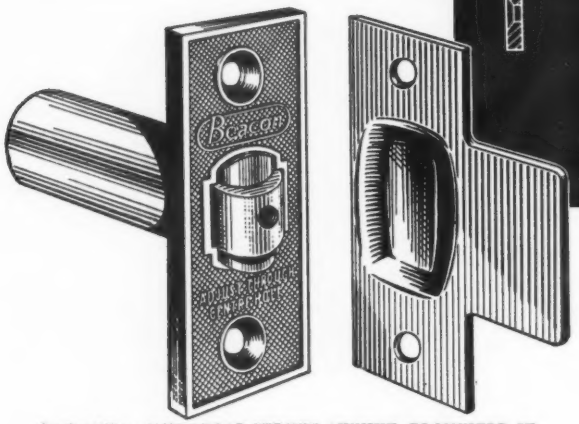
front adjustable  ***roller catch***



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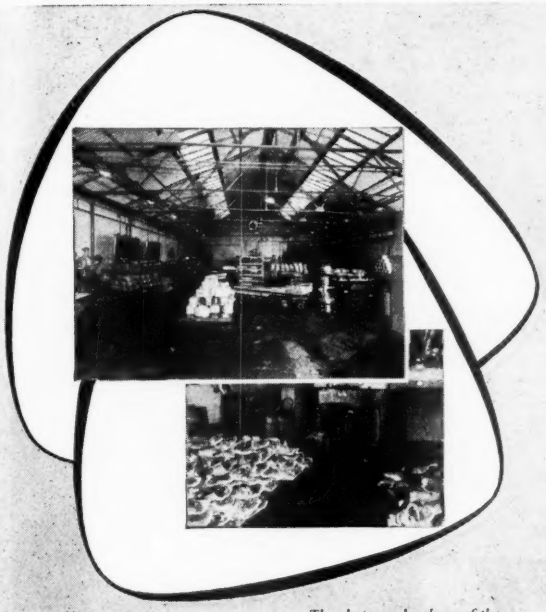

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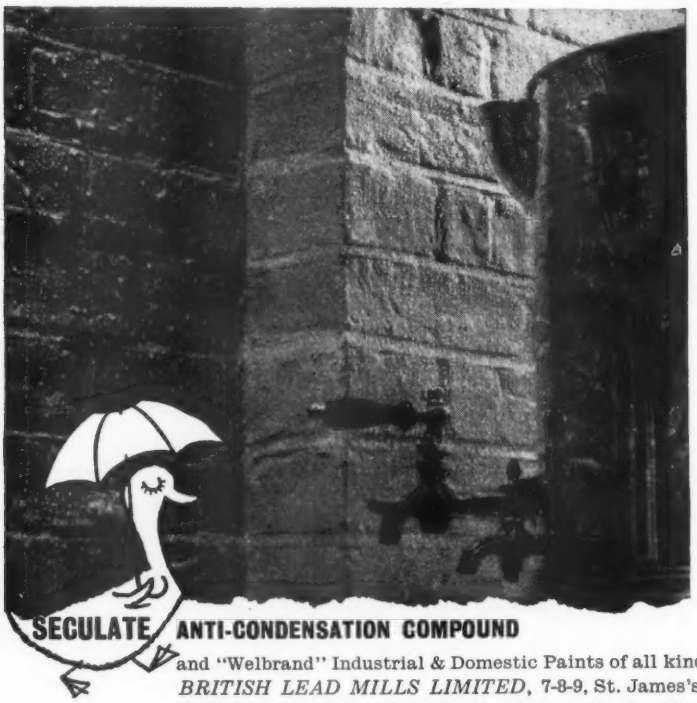

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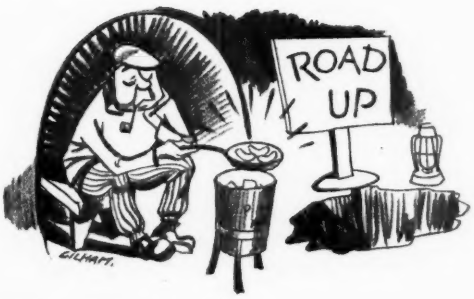

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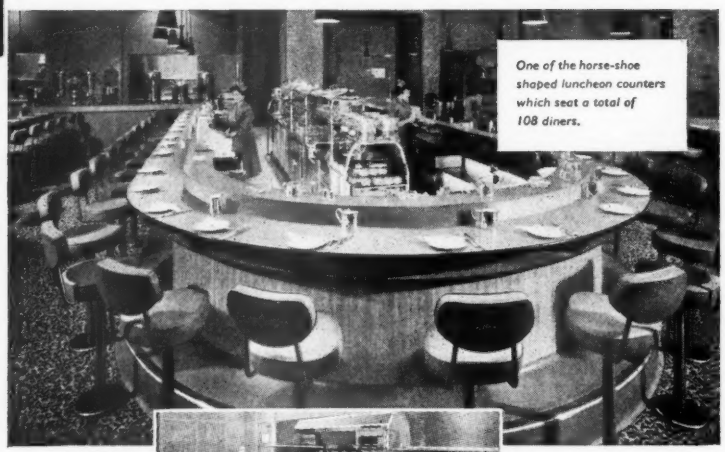

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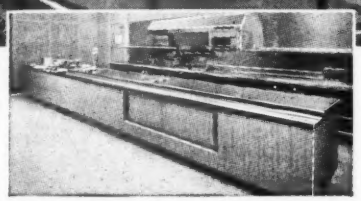

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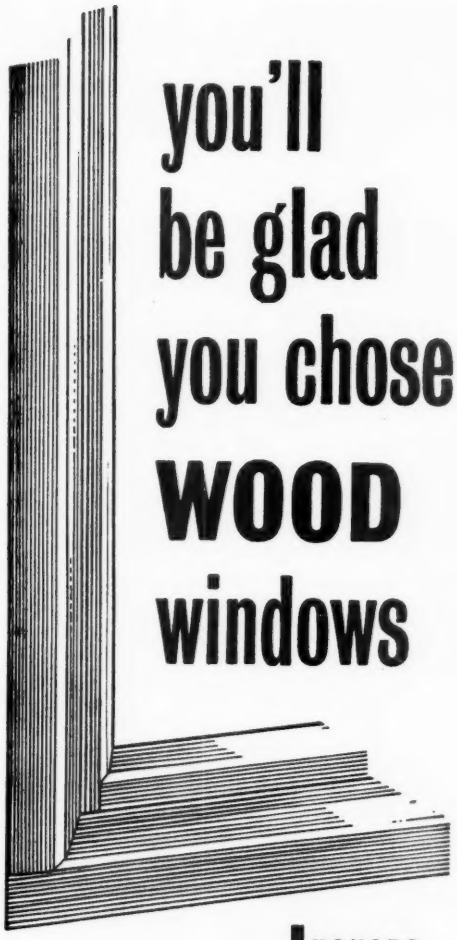

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'Yoicks!' said Baron Rabbit M.F.H. 'Thought the huntin' was good today.'

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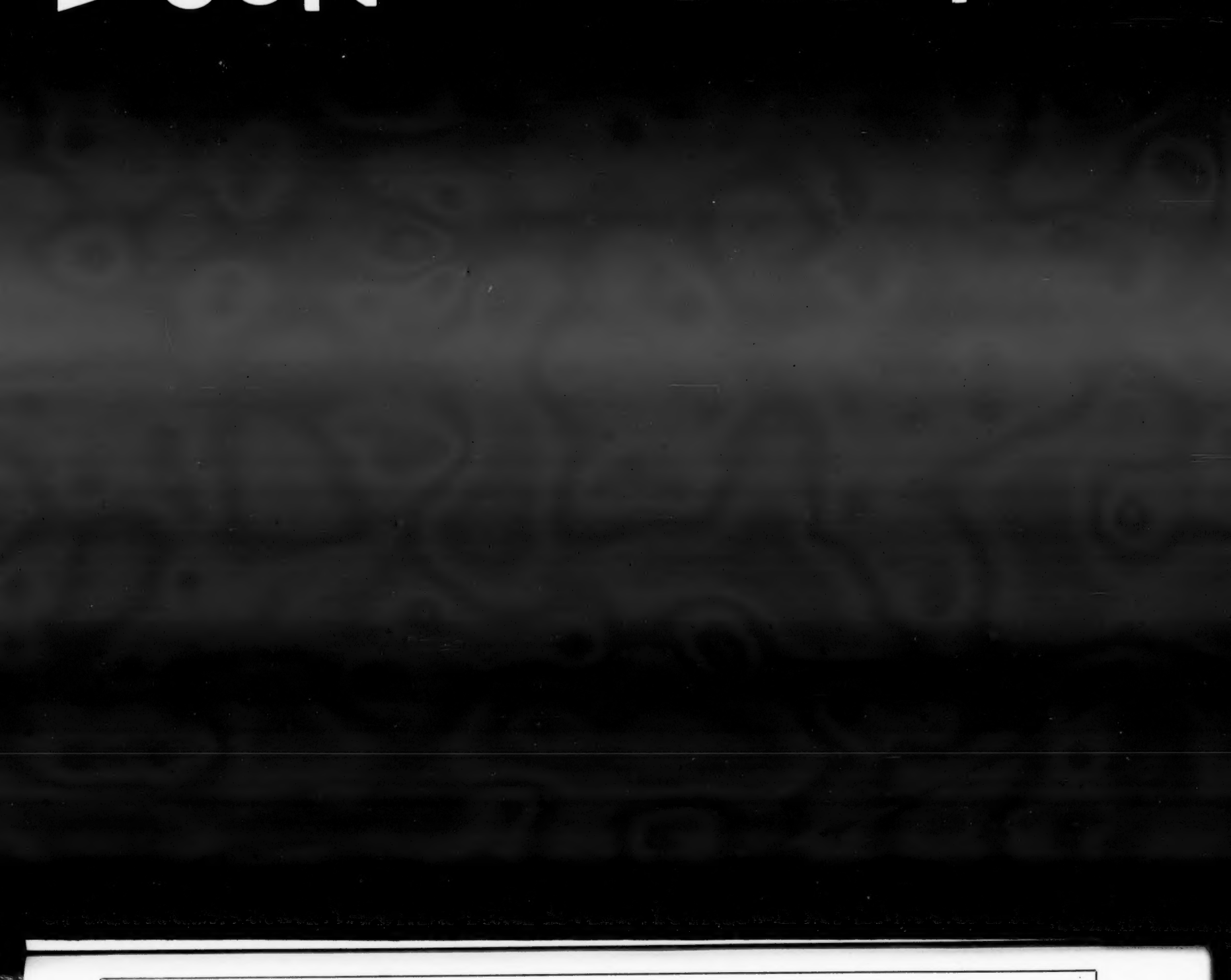

BUILDING RESEARCH STATION DIGEST 119

February 1959

Questions and Answers:

Heat pumps for domestic heating

Short bored piles – costs

Shrinkage cracking while houses dry out

Dry construction for partition walling

Single-stack plumbing for two-storey houses

THE questions dealt with in this Digest are a selection from a number submitted to the Station by the National Federation of Building Trades Employers at the request of the Federation of Registered House Builders. It is hoped to deal with further such questions in a future Digest.

HEAT PUMPS

Are heat pumps out of the question for central heating in houses?

This is basically a matter of economics, depending on whether suitable heat pumps can be made at a low enough price. No British models for full house heating are available at present but some manufacturers are working to develop suitable units.

The advantage of the heat pump over direct fuel-burning apparatus is that it delivers heat (via a warm-air or hot-water system) well in excess of the energy it consumes, the excess being obtained by cooling some such source as the outside air or ground. This gain depends partly on the operating temperature of the heating system, and a low-temperature system is the most advantageous. For that reason warm air or floor panels would be used rather than a conventional radiator system. One might then expect to obtain three or so units of heat for each unit consumed, i.e. electrical heating at about one-third of the normal running cost.

But such a machine, which works on the same principle as a refrigerator, is much more expensive than, say, a normal electrical heater of the same capacity. Heat pumps have been used for house-heating in America but there the circuit can be reversed to provide necessary summer cooling and the cost of the unit can largely be set against this cooling requirement; this same consideration applies to the small units available here for domestic water heating which provide cooling of the larder. In this country a heat pump for house-heating would normally have to justify itself economically as a heater only, although it could be arranged to provide domestic refrigeration as well. Detailed comparisons are not possible but the running cost quoted is roughly of the same order as that of a solid fuel or oil-fired boiler. This suggests that, to be economically attractive, the cost of the heat pump should be comparable with that of the items it replaces; boiler, flue and fuel store, and possibly part of the cost of a refrigerator.

SHORT BORED PILES – COSTS

Short bored piles are advantageous in some clay soils. How does their cost compare with that of normal house foundations? Could short bored piles be used in other soils?

The cost of the foundations for a 900 sq ft house on a level site is about £50, including excavation of a trench 2 ft 6 in. deep and 2 ft 3 in. wide, the provision of 9 in. of concrete

in the bottom and building 11 in. cavity brickwork up to damp-course level. As is now well known, houses founded at only this depth on shrinkable clay soils are liable to cracking (see Digests Nos. 3 and 42). Taking the foundation down to a depth of about 3 ft 6 in. increases the cost to around £75. This precaution is still not effective in protecting the structure against severe drying shrinkage caused by trees (see Digest No. 96).

Short bored concrete piles, 12 in. or 14 in. in diameter and 8 ft to 12 ft long, provide a much greater degree of protection against cracking of the house caused by the shrinkage of the clay than does the deeper strip foundation but at no more than the cost of the shallow strip foundation. The actual cost will depend on the local prices of labour and materials and on the hiring charge for a mechanical earth auger. Only when boring for one or two houses will it be economic to use a hand auger which, incidentally, is not suitable where the clay contains many stones.

The short bored pile foundation was devised as an economical solution to the problem of providing a satisfactory foundation for houses built on shrinkable clay soils. There is of course no basic objection to using the system in other soils provided the foundation is specifically designed for the particular type of soil and provided the method is practicable—in loose soils, for example, collapse of the walls would preclude the use of the technique altogether.

It is unlikely, however, that short bored piles will prove cheaper than normal foundations where the soil is not clay.

SHRINKAGE CRACKING

Is there any form of construction that will control the usual internal shrinkage cracks? The public does not readily accept that they have to have cracks which make their houses unsightly during a lengthy drying-out period. Many builders have to "make good" cracks and in doing so are put to the expense of some redecoration during the maintenance period. Would dry construction overcome this problem?

There is no "form of construction" that will control internal shrinkage cracking. The problem is a most complex one for which there is no simple solution. The risk of cracking can be reduced by using materials having a small drying shrinkage and subsequent moisture movement, by controlling the moisture content of the materials and the humidity of the building, and by correct detailing and good workmanship. In practice, however, it is not possible to comply with all these requirements in such a manner as to eliminate shrinkage cracking. The following notes indicate some of its causes and the ways and means whereby shrinkage cracking and its effects can be kept to a minimum, but it must be noted that there are other possible causes of movement that may lead to cracking or to the extension of minor cracks already present.

Drying shrinkage

Most building materials, except metals, shrink as they dry and expand when they become wet. The amount of movement varies for different materials, but it is the initial shrinkage as a building dries out that is of major importance. Subsequent movements caused by changes in atmospheric humidity are of less importance though they may still be significant—particularly in timber. Timber has a relatively high moisture movement across the grain, and consequently any timber components are liable to appreciable changes in dimensions as the moisture content of the timber changes (see F.P.R.L. Leaflet No. 47, B.S. 1186, and C.P. 112).

Sand-lime bricks and concrete products, particularly those made of light-weight concrete, also have a significant drying shrinkage and moisture movement, as discussed in Digests Nos. 6, 28, 29 and 32. The relevant British Standards contain clauses covering drying shrinkage. Cracks often occur also around the ends of concrete lintels, particularly if they have been cast *in situ* (rather than pre-cast and matured in the factory).

Plastering mixes based on lime and cement are liable to shrink; each coat should be allowed time to dry before the next is applied. Rich cement-sand mixes and dirty sands should be avoided. With mixes based on gypsum plaster the liability to cracking is off-set by the expansion of the plaster as it sets.

Gypsum products in general and clay bricks have negligible shrinkage movements.

Controlling moisture content

Materials having appreciable drying shrinkage should be used in as dry a state as possible. They should be covered on the site and uncompleted work should also be covered.

The liability to shrinkage cracking at the joints of the units of "dry" construction or at the junction of these units with other parts of the house will depend largely upon the moisture content of the units at the time of fixing in relation to the moisture content they will subsequently attain when the house is occupied. Ideally, the units should be pre-conditioned to approximately their ultimate moisture content and should be maintained in this condition between the time of fixing and the time of occupancy (see F.P.R.L. Leaflet No. 9, B.S. 1186, and C.P. 112). Since this is not often practicable in house construction, there is always risk of some movement.

Furthermore, the variations in the moisture content of building materials, particularly that of timber, with changes in the humidity of the air limits the possibility of avoiding cracking even if precautions were taken to avoid serious initial shrinkage. Cracks and open joints may be filled during redecoration but soon become obvious again with changes in humidity.

Detailing and workmanship

From what has already been said it is evident that shrinkage cracking cannot wholly be eliminated by the precautions mentioned above. Its effects can be minimized or concealed by attention to detailing, particularly at joints between units and between larger components. An example of the latter is the traditional use of architraves to cover the joints between a door frame and the adjoining plasterwork.

Particular attention should be paid to timber floors supporting ceilings. The use of inadequately seasoned timber, allowing timber to become wet during the course of building operations, the use of thin-section joists, insufficient binders and solid strutting instead of herring-bone strutting between the floor joists, should be avoided. With insufficient binders, ceiling joists can twist as they shrink, causing cracking of the ceiling. With solid strutting, the shrinkage of the joists frees them from the struts; this will increase the differential loading of joists, and exaggerated local deflections may cause cracking of the ceiling. Herring-bone strutting, however, is tightened by the shrinkage of the joists; there is still a risk of cracking at the junction of the ceiling and the walls, and the most reasonable way of concealing this is to provide pre-formed coving at the junction.

Some precautions to reduce risk of cracking

(1) Use pre-cast concrete products to British Standard requirements. Most British Standards for these materials include limits for drying shrinkage. Use materials that have been made for at least one month.

(2) Keep materials under cover in wet weather.

(3) Protect uncompleted work against rain.

(4) Allow backings and undercoats to dry and shrink before the finishes are applied.

(5) Do not use strong (1 : 3 cement : sand) mixes for mortar, plaster undercoats or renderings. Avoid using dirty sands.

(6) Use adequate binders and struts to reduce warping of timbers.

(7) Where practicable, timber units should be conditioned approximately to the moisture content they will attain in normal use and should be maintained at that moisture content after fixing.

(8) Use cover moulds or specially designed joints to conceal cracks or to make them less obtrusive.

(9) Where practicable, provide movement joints—for example in *in situ* concrete pavings.

Some of these precautions may increase costs, but this should be balanced against the cost of making good at a later stage and the satisfaction of at least reducing cracking.

DRY CONSTRUCTION

Is it true that most dry construction for partition walling in housing costs more for labour and materials but that it may lead to a saving in construction time?

The problems of dry partitioning in housing were studied during a production experiment recently carried out by the Station in which a total of over 400 houses were built on five widely separated sites. The partitions of some of these houses, all of which were to the same plan, were constructed of one of four different types of factory-made plaster or plasterboard-faced panels. Other houses had the traditional plastered clinker-block partitions, otherwise the houses were identical so that a direct comparison of costs could be made. The four types of panels comprised two of standard-sized units in normal production, which could be cut to fit where necessary, and two of purpose-made panels complete with joinery and needing no cutting.

The experiment showed that the panels could only replace the straightforward parts of the traditional work leaving the more complicated work—to door and window reveals and to the chimney breast, for example—to be done in plastered traditional construction. This increased the total number of operations and led to a loss of time through "stopping and starting". It became clear, therefore, that if factory-made components are to be economic, the design of the partition walls should be such as to eliminate the whole of one or more of the operations involved in the equivalent traditional work. Only if this were done could the use of these components be expected to lead to a reduction in construction time.

For all four forms of panel, the overall cost of the partitions was greater than that of the traditional construction replaced. Only about half the purchase price of the purpose-made panels was accounted for by the materials of which they were made, however, so that production runs larger than were called for in this experiment might be expected to reduce this price. Such runs, however, would be possible only for extensive developments of houses and flats of restricted plan types.

SINGLE-STACK PLUMBING

Does a single-stack plumbing system pay on two-storey houses?

Not generally. While it has been demonstrated that installation of the single-stack plumbing system in multi-storey blocks of flats of up to five storeys can lead to savings of about £40 per flat and significant though somewhat smaller savings above that height, those that may be expected to result from the installation of such a system in two-storey housing are only marginal.

The decision to install a single-stack system in two-storey houses will not, therefore, be taken on grounds simply of cost. However, where the positions of the bathroom, W.C. and kitchen lend themselves to it, the installation of a single-stack system may facilitate the provision of an internal stack and so improve the external appearance of the house.

(Prepared at the Building Research Station, Garston, Herts.)

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